HCD-G1

SERVICE MANUAL

AEP Model
UK Model
E Model

HCD-G1 is the tuner, deck, CD and amplifier section in LBT-G1/G1S.

CD SECTION	Model Name Using Similar Mechanism		NEW
	CD Mechanism Type		CX3
	Base Unit Type		KSM-213BCM
	Optical Pick-up Type		KSS-213B/S-N
TAPE DECK SECTION	Model Name Using Similar Mechanism		HCD-H100
	Tape Transport Mechanism Type	DECK-A	TK20FX-SW943-800
		DECK-B	TK20FX-SW943-800

SPECIFICATIONS

Amplifier section

Continuous RMS power output
EXCEPT AEP, UK models : 40 + 40 watts (6 ohms at 1 kHz, 10% THD)
AEP, UK models : **28 + 28 watts (8 ohms at 1 kHz, 10% THD)**
Peak music power output (EXCEPT AEP, UK models) 550 watts
Music power output (AEP, UK models) 50 + 50 watts
DIN power output (AEP, UK models) **20 watts + 20 watts (8 ohms, at 1 kHz, DIN)**

Inputs	PHONO: 4.4 mV
Outputs	PHONES (stereo phone jack): accepts headphones of 8 ohms or more. SPEAKER: accepts impedance of 8 to 16 ohms.

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 – 790 nm) Emission duration: continuous
Laser output	Max. 400μW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response	40 Hz – 16 kHz (±0.5 dB)

Tape player section

Recording system	4-track 2-channel stereo
Frequency response	60 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Aerial	FM wire aerial
Aerial terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range
Mexican models: 530 – 1,710 kHz (with the tuning interval set at 10 kHz)
AEP, UK models: 531 – 1,602 kHz (with the interval set at 9 kHz)
Other models: 531 – 1,602 kHz (with the tuning interval set at 9 kHz) 530 – 1,710 kHz (with the tuning interval set at 10 kHz)

Aerial	AM loop aerial External aerial terminals
Intermediate frequency	450 kHz

— Continued on next page —

COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

General

Power requirements	
	AEP, UK models: 220 – 230 V AC, 50/60 Hz Mexican model: 120 V AC, 50/60 Hz Other models: 110 – 120 V or 220 – 240V AC, 50/60 Hz adjustable with voltage selector
Power consumption	AEP, UK models: 120 watts Other models: 195 watts
Dimensions	Approx. 355 × 325 × 330 mm (14 × 12 7/8 × 13 in) (w/h/d) incl. projecting parts and controls
Mass	AEP, UK models: Approx. 7.9 kg (17 lb 7 oz) Other models: Approx. 8.8 kg (19 lb 6 oz)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

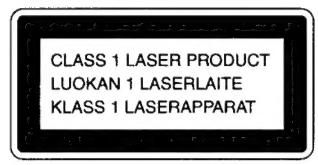
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

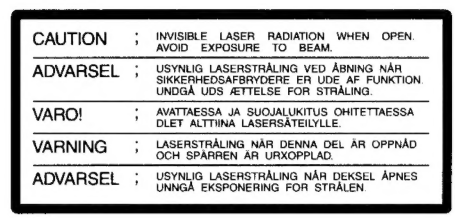
Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



This caution label is located inside the unit.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

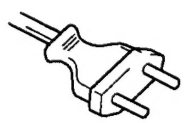
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

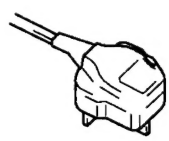
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION
— AC POWER SUPPLY CODE —

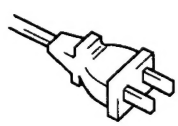
AEP model



UK model



Mexican model (Without voltage selector)
E, Argentine model (With voltage selector)



- Abbreviation
  AR : Argentine model
  MX : Mexican model

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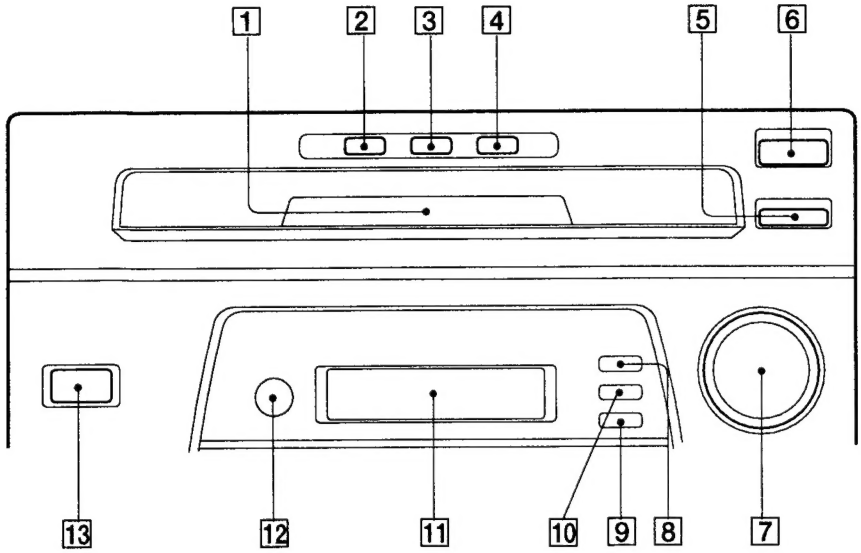
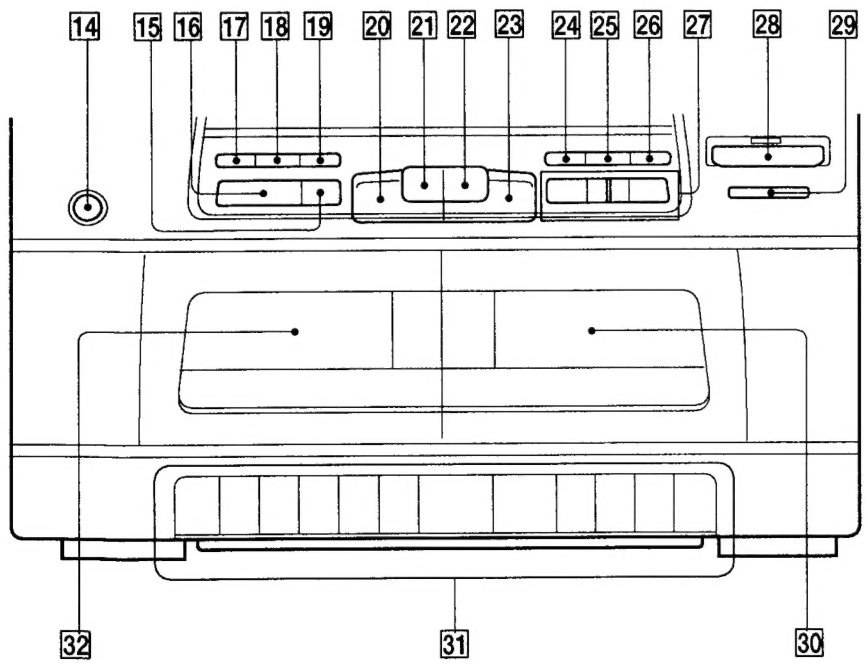
SECTION 1
GENERAL

Location of Parts and Controls



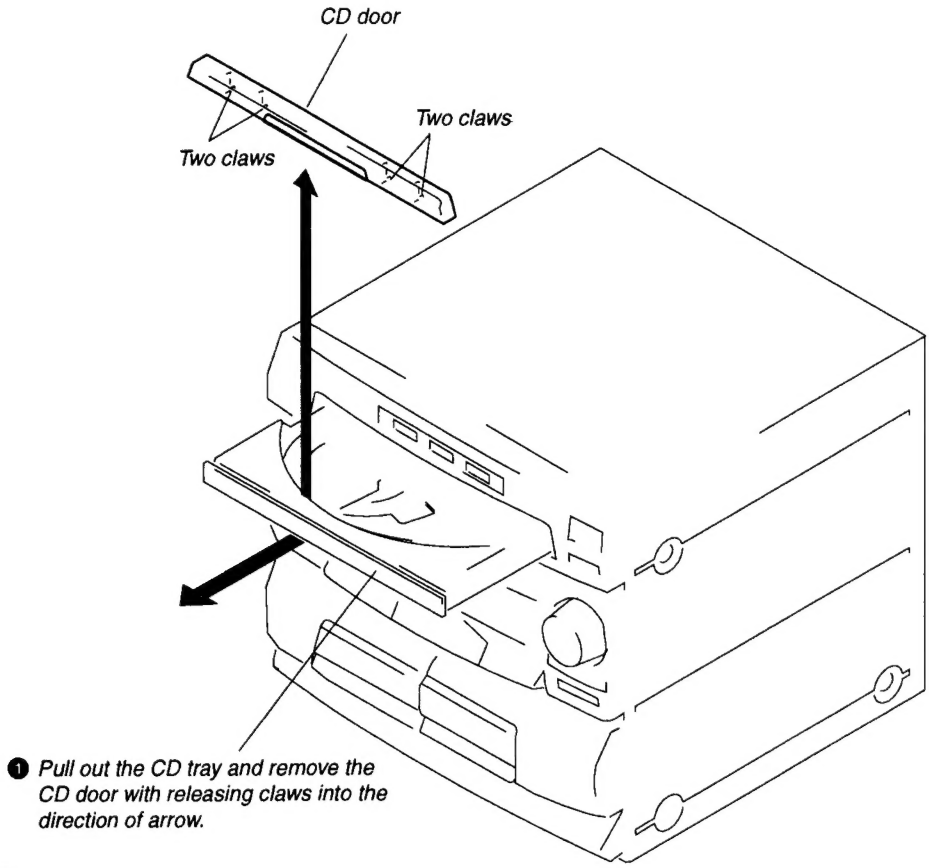


1 Disc tray
2 DISC 1 button
3 DISC 2 button
4 DISC 3 button
5 ⏏ OPEN/CLOSE button
6 DISC SKIP button
7 VOLUME knob
8 CLOCK SET button
9 TIMER SET, CLOCK LIGHT button
10 TIMER MODE button
11 Display window
12 Remote sensor
13 POWER button
14 PHONES jack
15 ■ (stop) button
16 ▷❚❚ (play/pause) button
17 SHUFFLE buttom
18 PROGRAM button
19 REPEAT button
20 CD button
21 TAPE button
22 PHONO button
23 TUNER/BAND button
24 PRESET – button
25 PRESET + button
26 MEMORY button
27 – TUNING +/⏮ ◀◀/
▶▶ ⏭ buttons
28 DBFB button
29 PRESET EQ button
30 Deck B
31 Tape operating buttons
● (recording) (for deck A only)
▷ (play)
◀◀ (fast rewind)
▶▶ (fast forward)
■⏏ (stop/eject)
❚❚ (pause)
32 Deck A

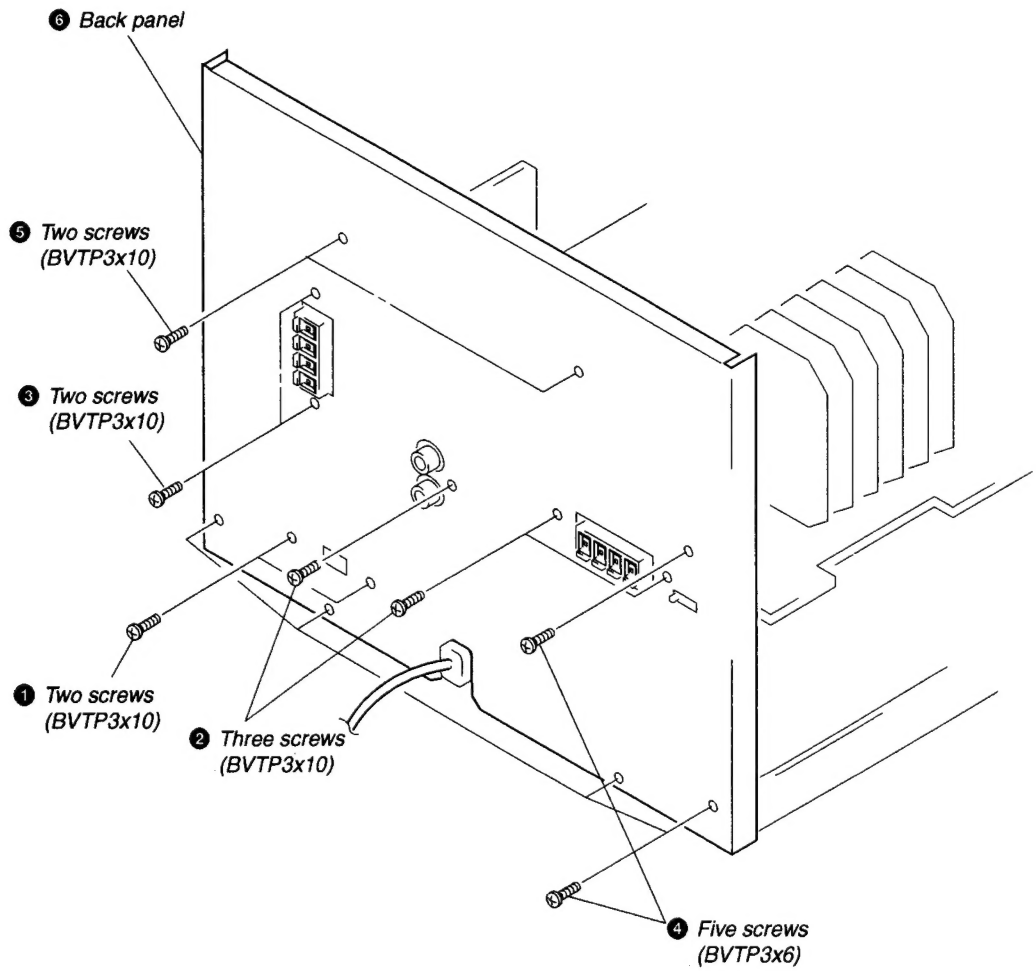
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

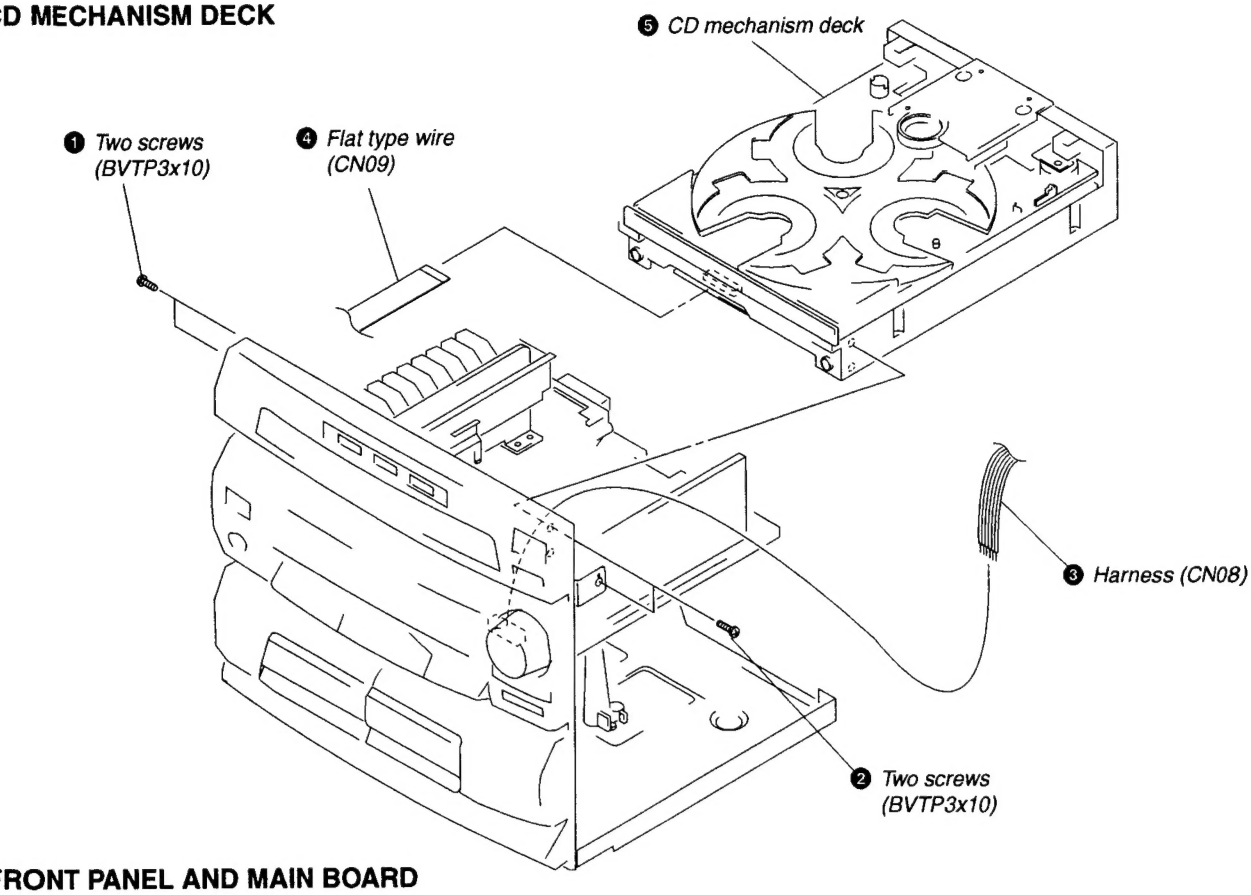
2-1. CD DOOR



2-2. BACK PANEL

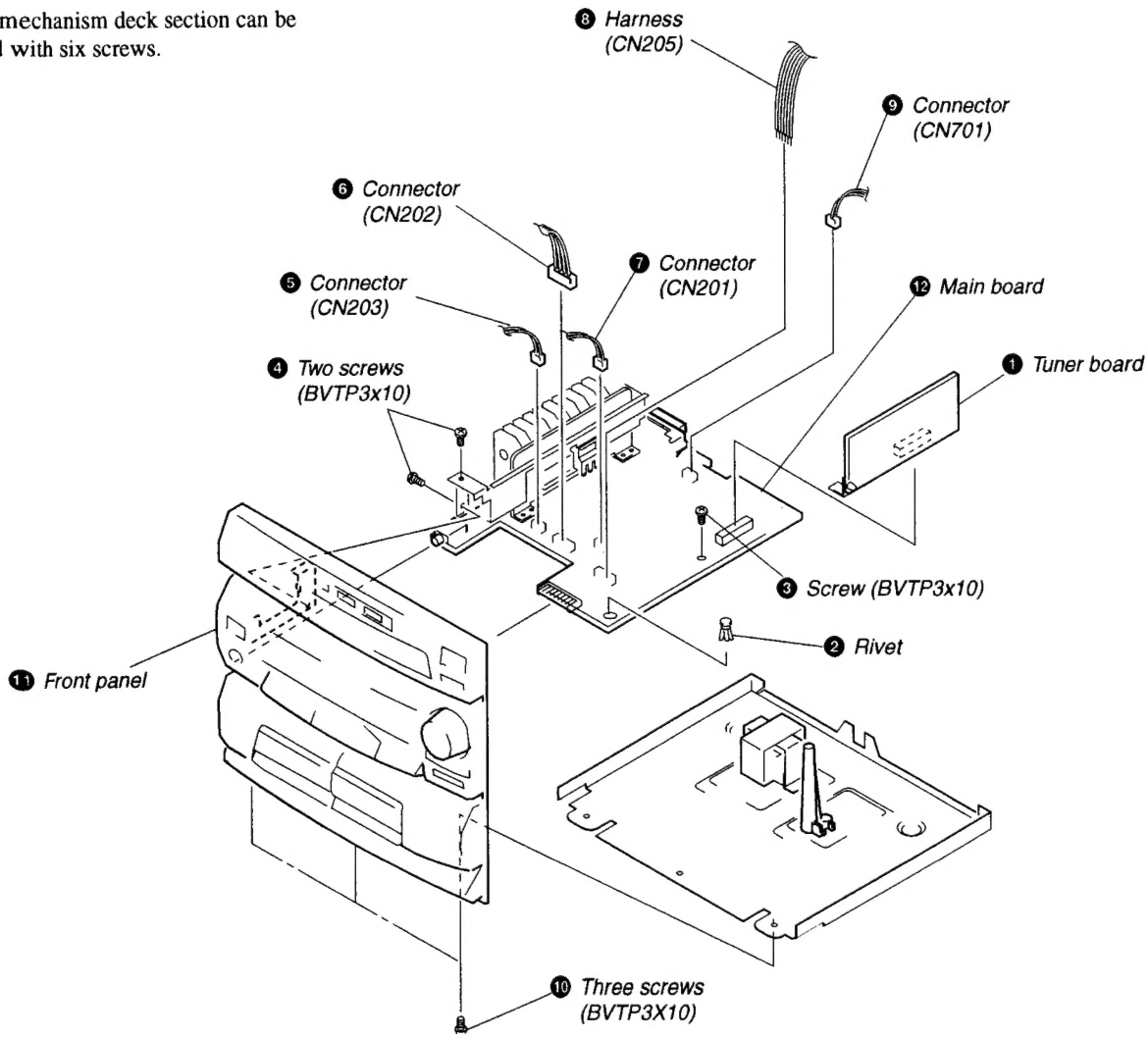


2-3. CD MECHANISM DECK

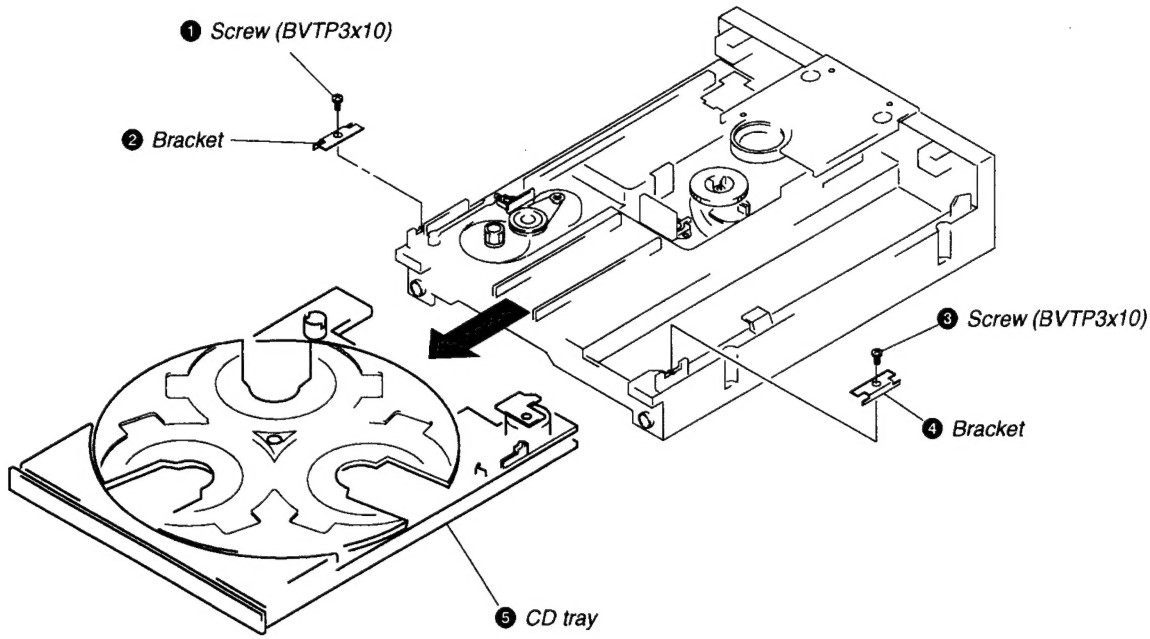


2-4. FRONT PANEL AND MAIN BOARD

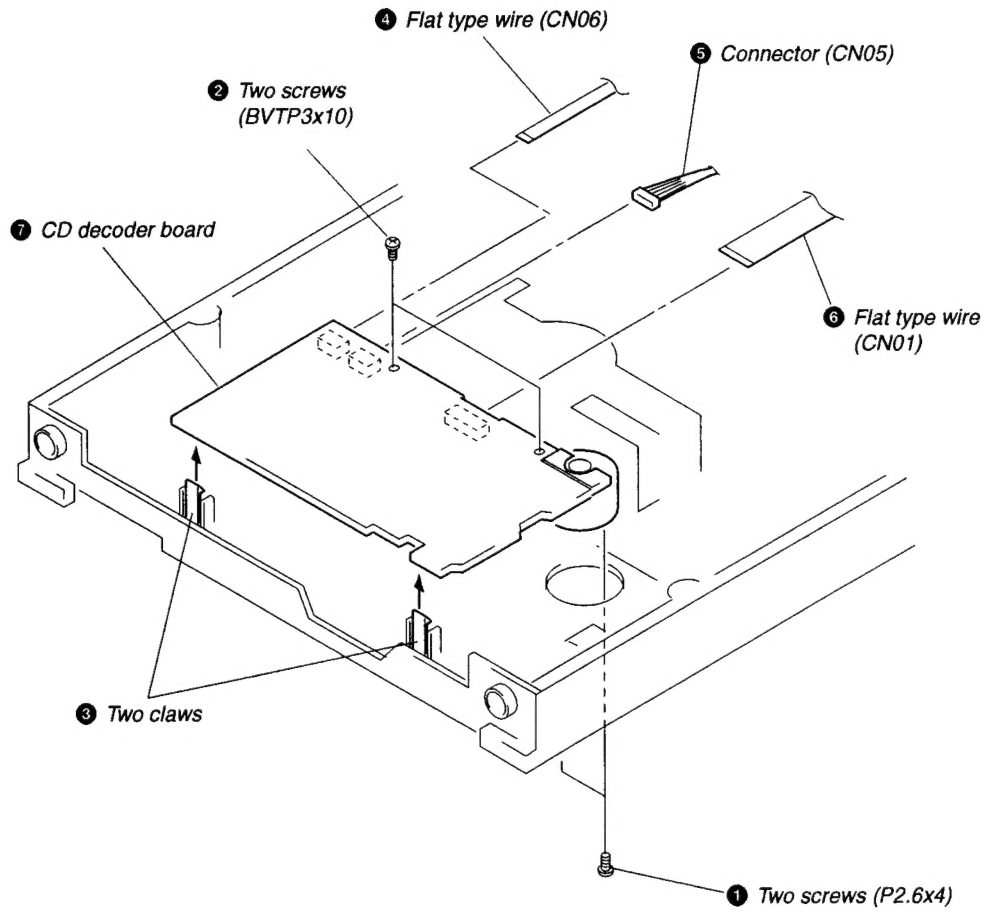
The TC mechanism deck section can be removed with six screws.



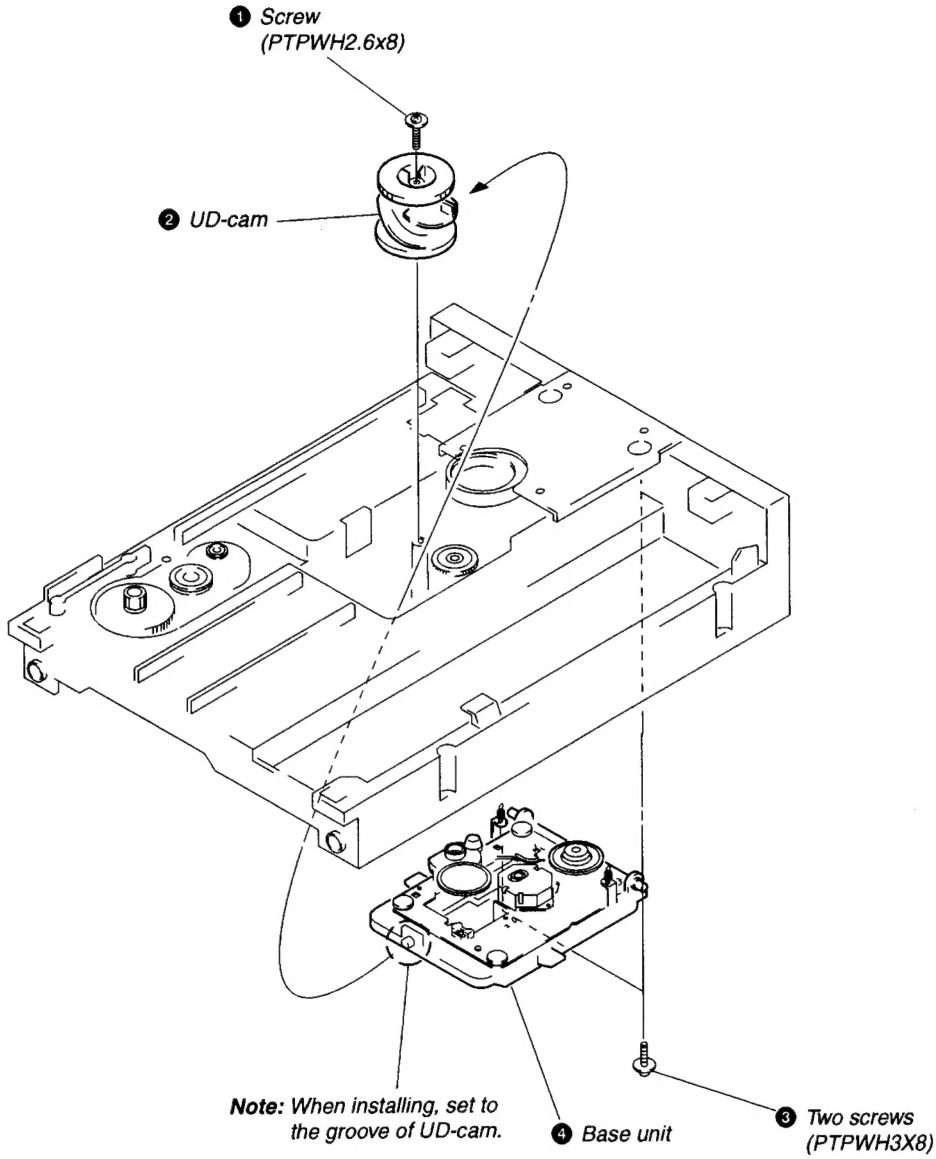
2-5. CD TRAY



2-6. CD DECODER BOARD



2-7. BASE UNIT


❶ Screw
(PTPWH2.6x8)
❷ UD-cam
Note: When installing, set to
the groove of UD-cam.
❹ Base unit
❸ Two screws
(PTPWH3X8)

SECTION 3
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   - record/playback heads
   - erase head
   - capstan
   - pinch rollers
   - rubber belts
   - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	40 to 70 g • cm (0.56 - 0.97 oz • inch)
FWD back tension	CQ-102C	1 to 5 g • cm (0.01 - 0.07 oz • inch)
FF/REW	CQ-201B	55 to 140 g • cm (0.76 - 1.94 oz • inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head damagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

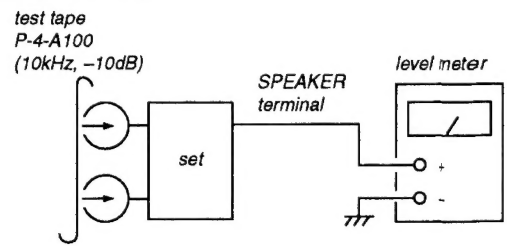
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

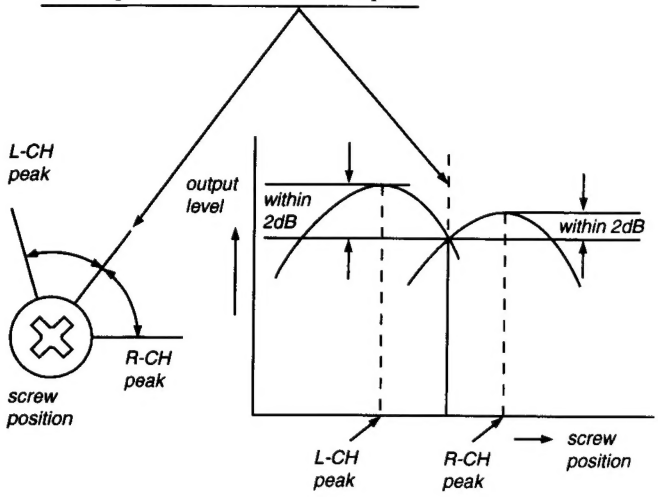
Note: Perform this adjustments for both decks.

Procedure:

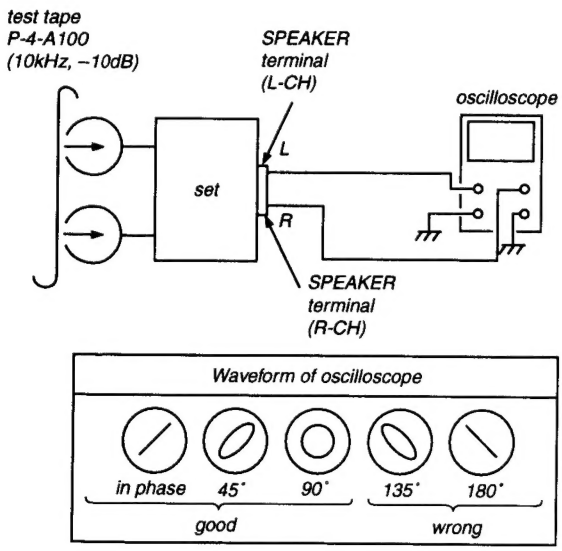
1. Mode : Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 2 dB of peak.

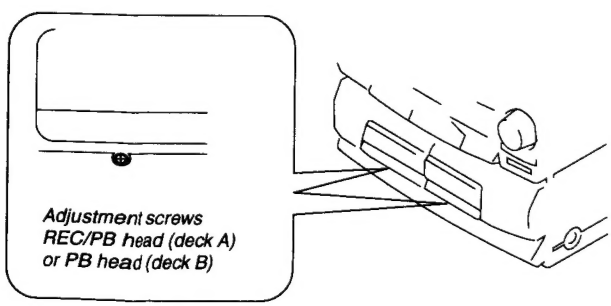


3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the parts adjusted.

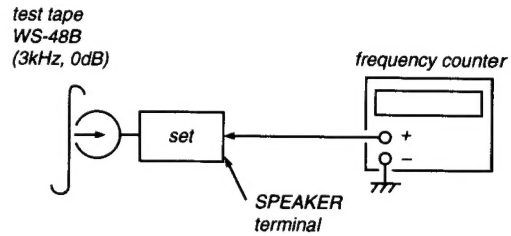
Adjustment Location:



Tape Speed Adjustment (Deck A)

Procedure:

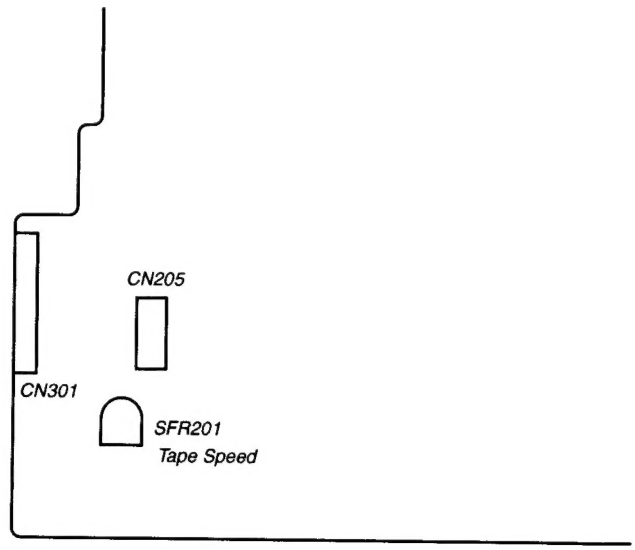
1. Mode: Playback



2. Adjust the SFR201 so that the frequency counter reads 3,000 Hz ± 90 Hz.

Adjustment Location

[MAIN BOARD] — Component side —



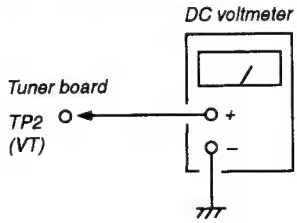
Sample Value of Wow and flutter

W. RMS (JIS) within 0.3%
(test tape: WS-48B)

TUNER SECTION | 0 dB=1μV

Note: As a FM front end (U1) is difficult to repair if faulty, replace it with new one. (AEP, UK models)

AM Tuning Voltage Adjustment

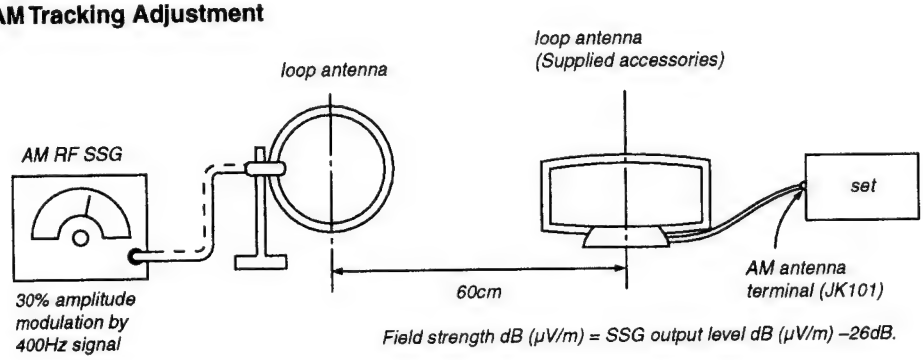


Procedure:

1. Set the reception frequency of the unit to 530 kHz (10 kHz step) or 531 kHz (9 kHz step).
2. Adjust L105 for 1.2 ± 0.05 V reading on the DC voltmeter.
3. Set the reception frequency of the unit to 1,710 kHz (10 kHz step) or 1602 kHz (9 kHz step).
4. Confirm that the voltage reading on the DC voltmeter is within 8.0 ± 0.5 V.

Adjustment Location: TUNER board

AM Tracking Adjustment



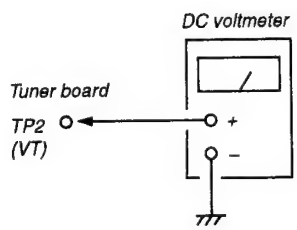
Procedure:

1. Tune the set to 600 kHz (10 kHz step) or 603 kHz (9 kHz step).
2. Set the output of AM RF SSG so that the input level of the set will become 60 dB (μV/m).
3. Adjust L104 so that when the waveform on the oscilloscope is maximum, no noise appears.
4. Tune the set to 1,400 kHz (10 kHz step) or 1404 kHz (9 kHz step).
5. Adjust TC102 so that when the waveform on the oscilloscope is maximum, no noise appears.

- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location: TUNER board

FM Tuning Voltage Adjustment (EXCEPT AEP, UK models)

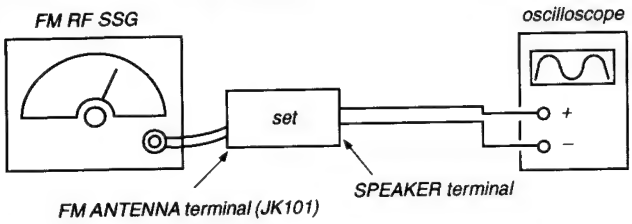


Procedure :

1. Set the reception frequency of the unit to 87.5 MHz.
2. Adjust L103 for 1.2 ± 0.05V reading on the DC voltmeter.
3. Set the reception frequency of the unit to 108 MHz.
4. Confirm that the voltage reading on the DC voltmeter is within 7.8 ± 0.5V.

Adjustment Location: TUNER board

FM Tracking Adjustment (EXCEPT AEP, UK models)



Carrier frequency : 90 MHz, 106 MHz
Modulation : AUDIO 1kHz, 75kHz deviation (100%)
Output level : 20 dB (at 75 Ω open)

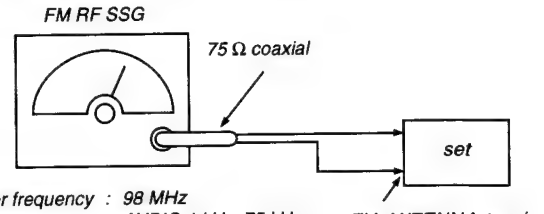
Procedure:

1. Tune the set to 90 MHz.
2. Adjust L102 so that when the waveform on the oscilloscope is maximum, no noise appears.
3. Tune the set to 106 MHz.
4. Adjust TC101 so that when the waveform on the oscilloscope is maximum, no noise appears.

- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location: TUNER board

FM Tuned Level Adjustment



Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 28 dB (at 75 Ω open)

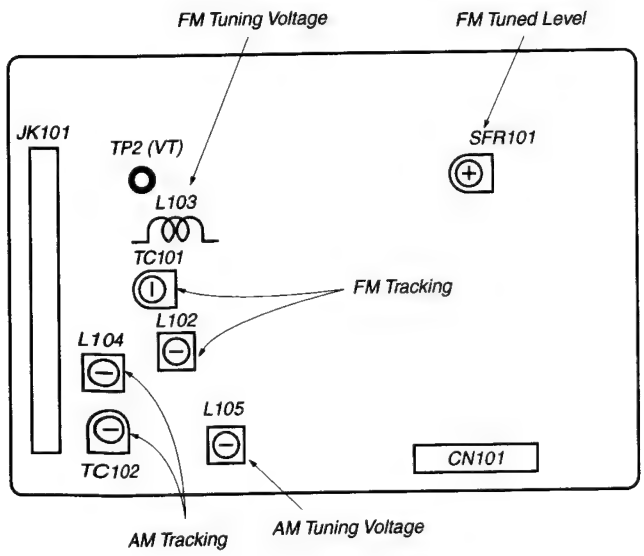
Procedure:

1. Supply a 28 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust SFR101 to the point (moment) when the TUNED indicator will change from going off to going on.

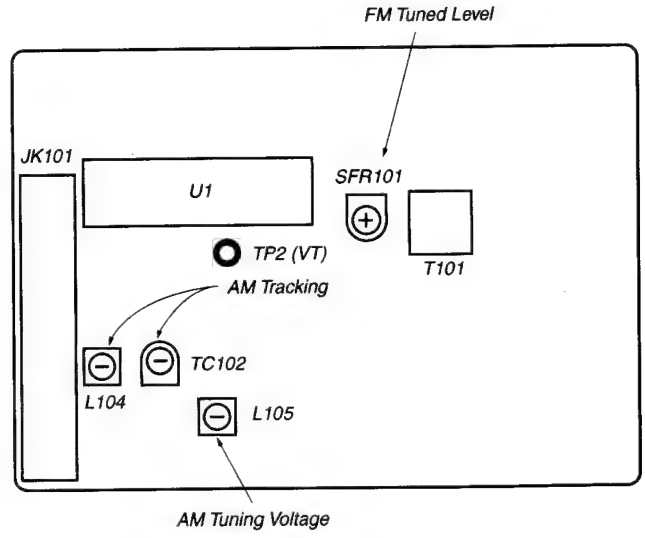
Adjustment Location: TUNER board

Adjustment Location

EXCEPT AEP, UK models
[TUNER BOARD] — Component side —



AEP, UK models
[TUNER BOARD] — Component side —

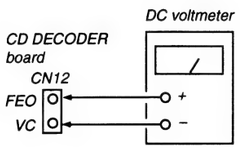


CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

Focus Bias Adjustment



Procedure:

1. Connect DC voltmeter to test point CN12 (FEO), (VC) on CD DECODER board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and stop.
4. Adjust VR01 so that the DC voitmeter reading is 0 ± 20 mV.

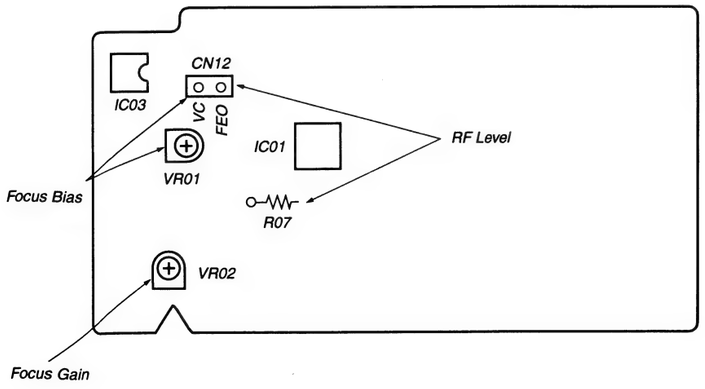
Adjustment Location: CD DECODER board

Focus Gain Adjustment (VR02)

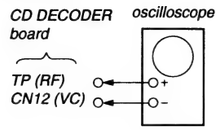
This gain has a margin, so even if it is slightly off.
There is no problem.
Therfore, do not perform this adjusment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location

[CD DECODER BOARD] — Component side —



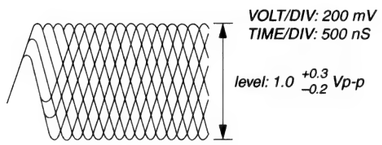
RF Level Check



Procedure :

1. Connect oscilloscope to test point TP (RF) on CD DECODER board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

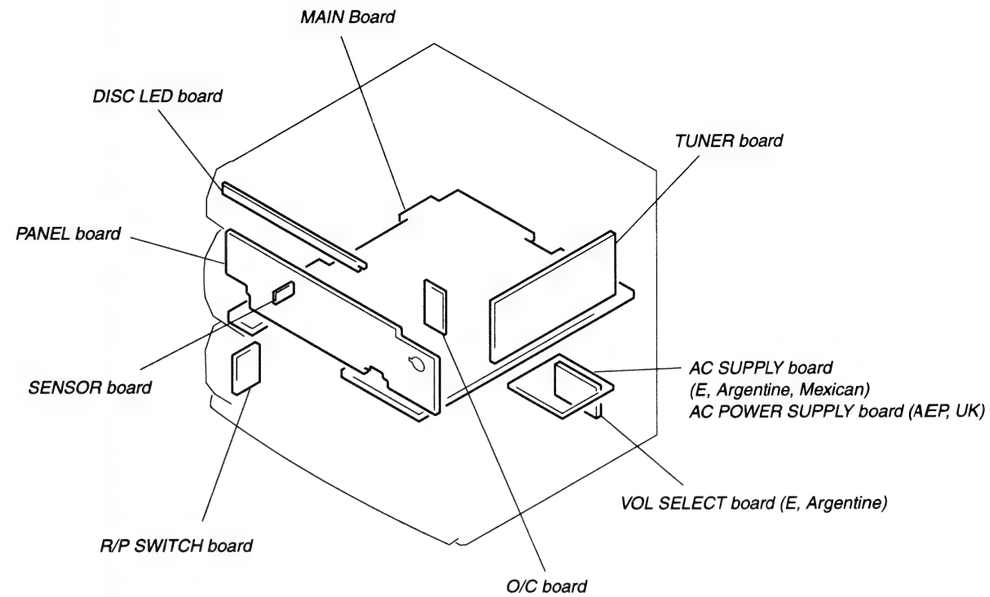
Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

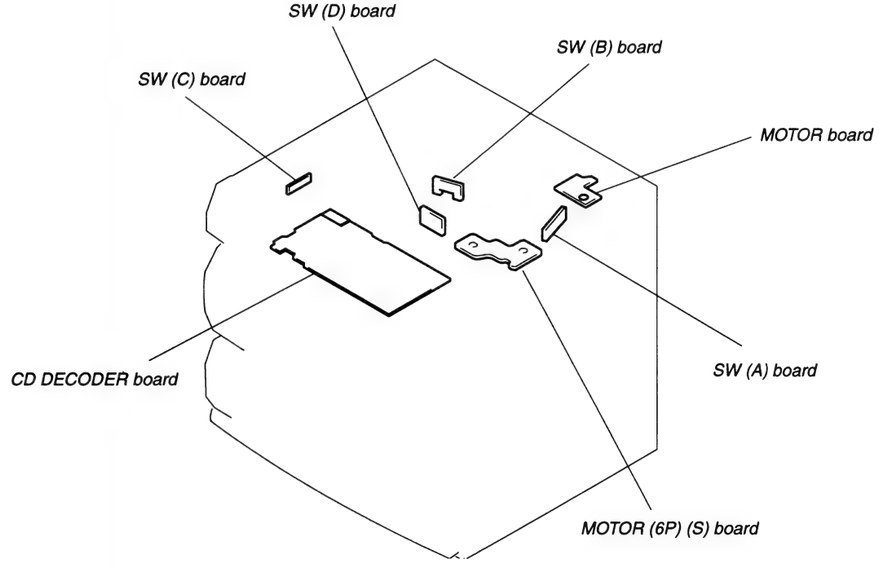


Adjustment Location: CD DECODER board

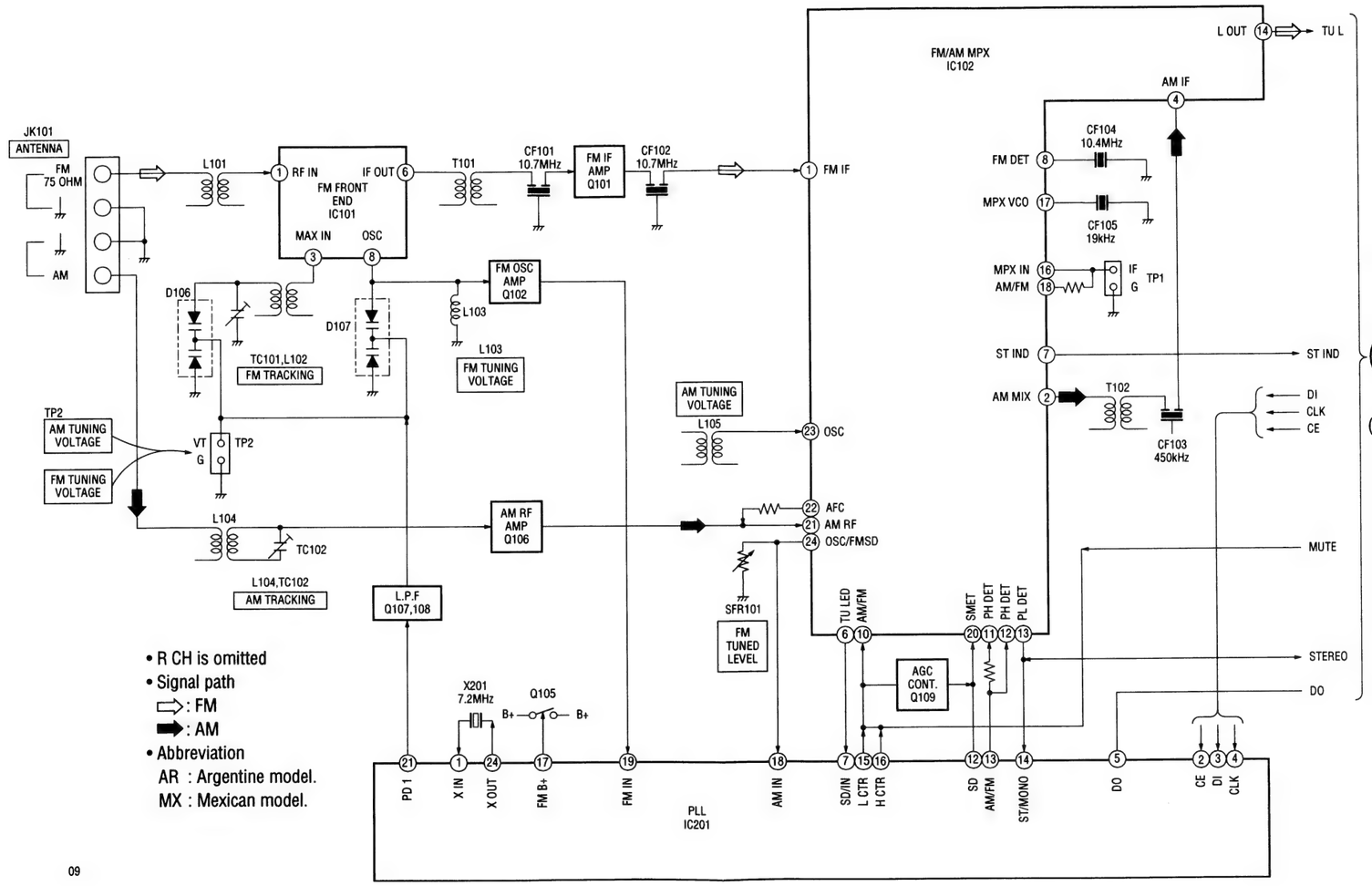
SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION

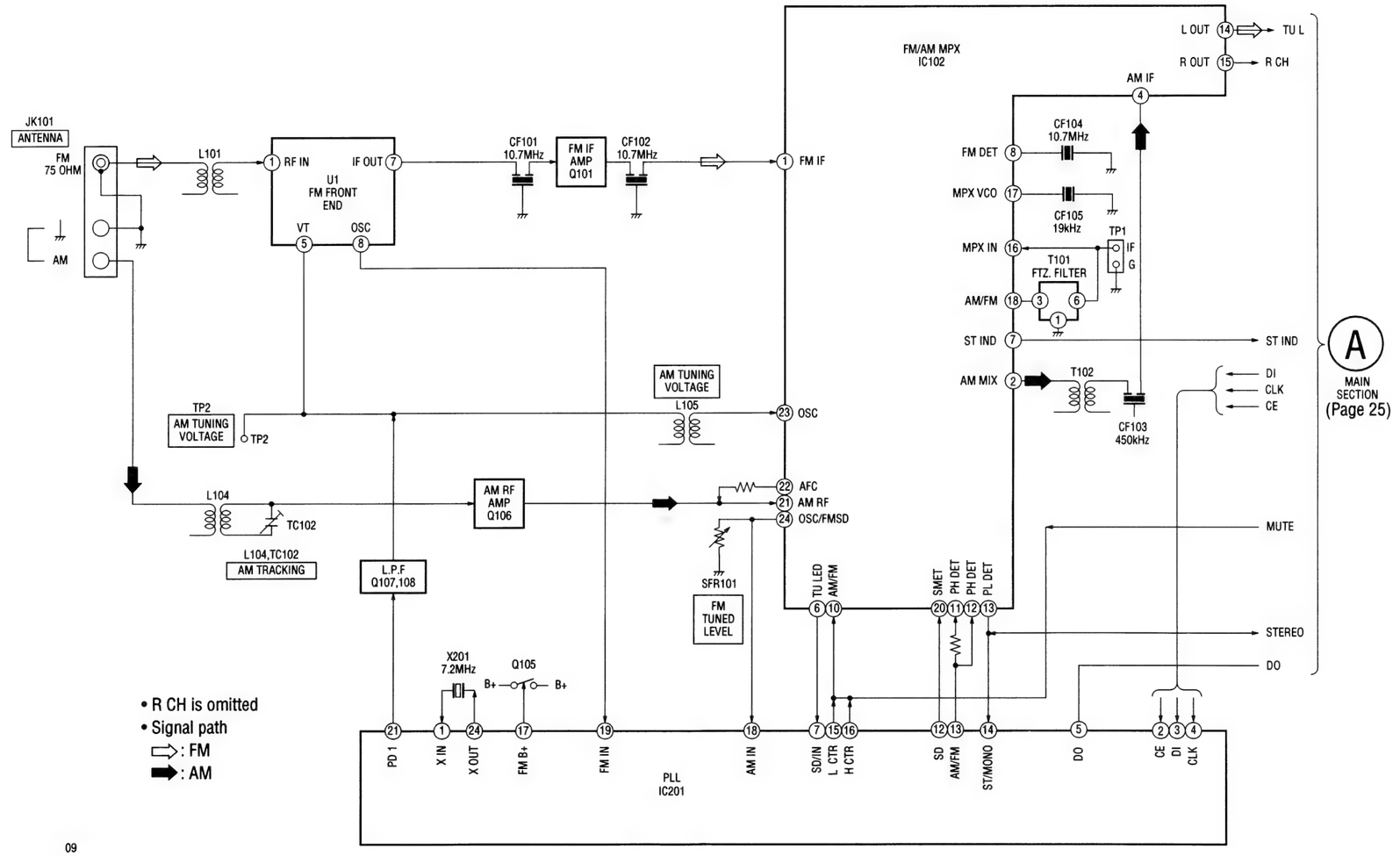




5-2. BLOCK DIAGRAMS
— TUNER SECTION — (E, AR, MX models)

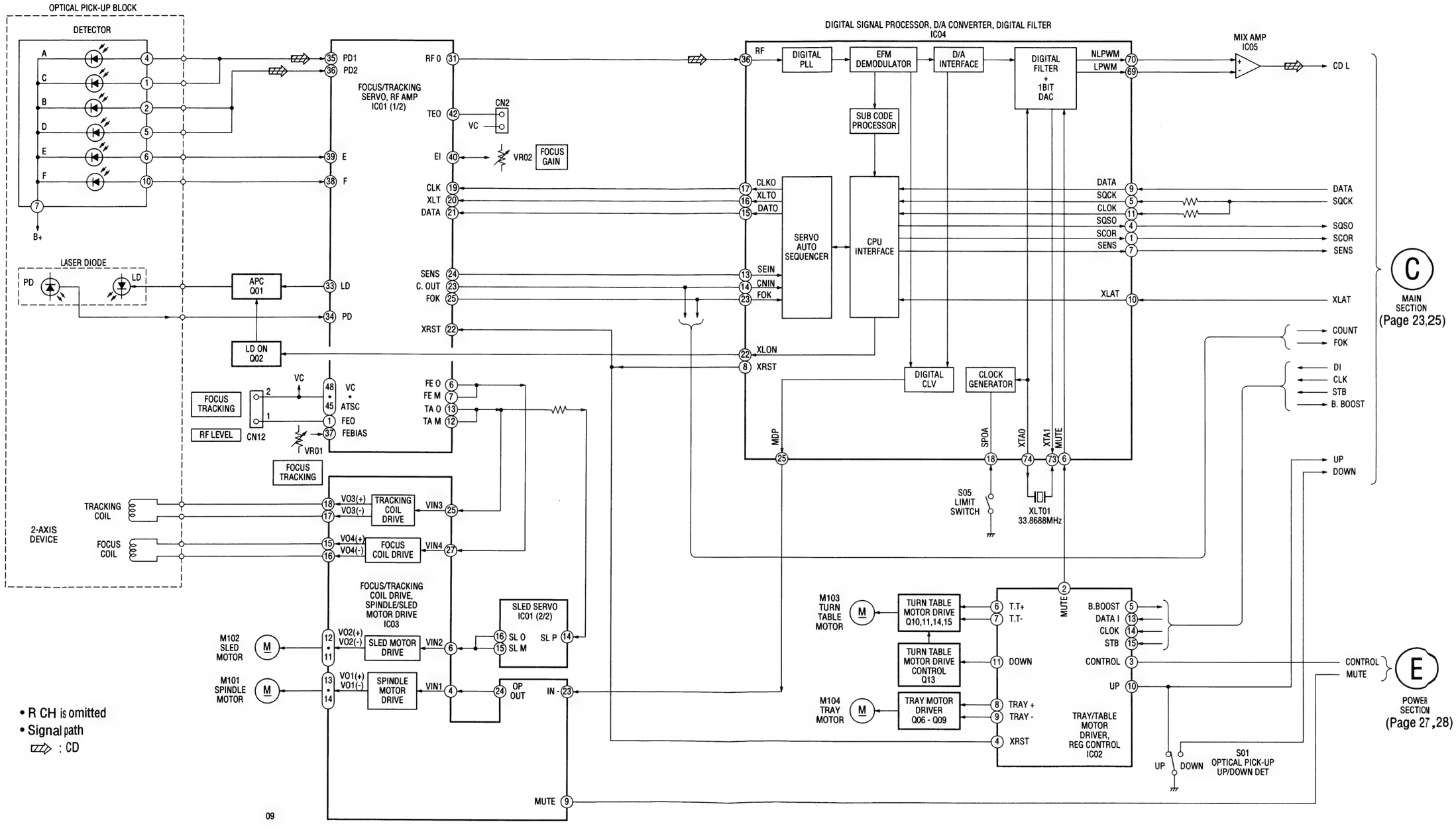


— TUNER SECTION — (AEP, UK models)

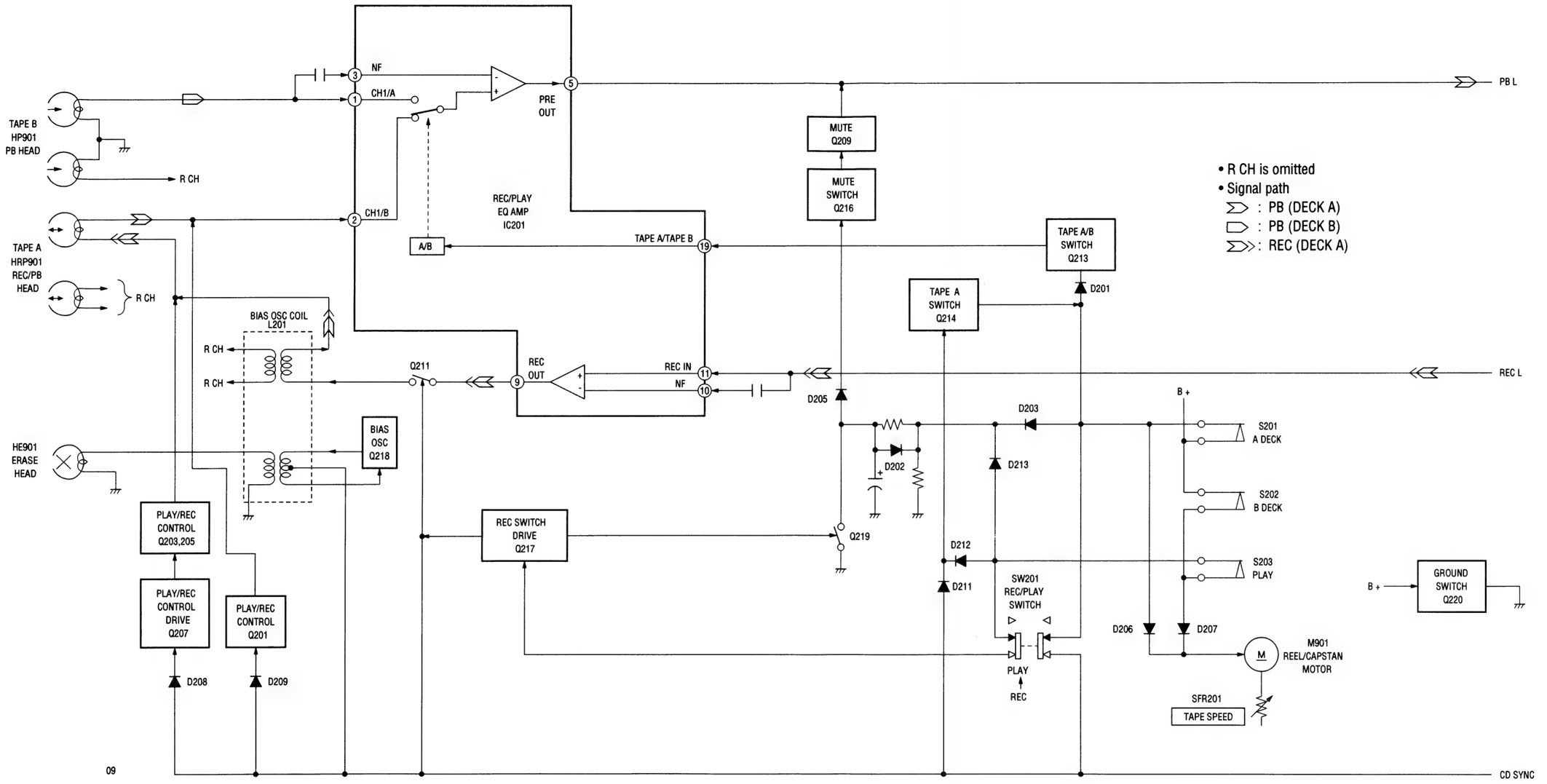


09

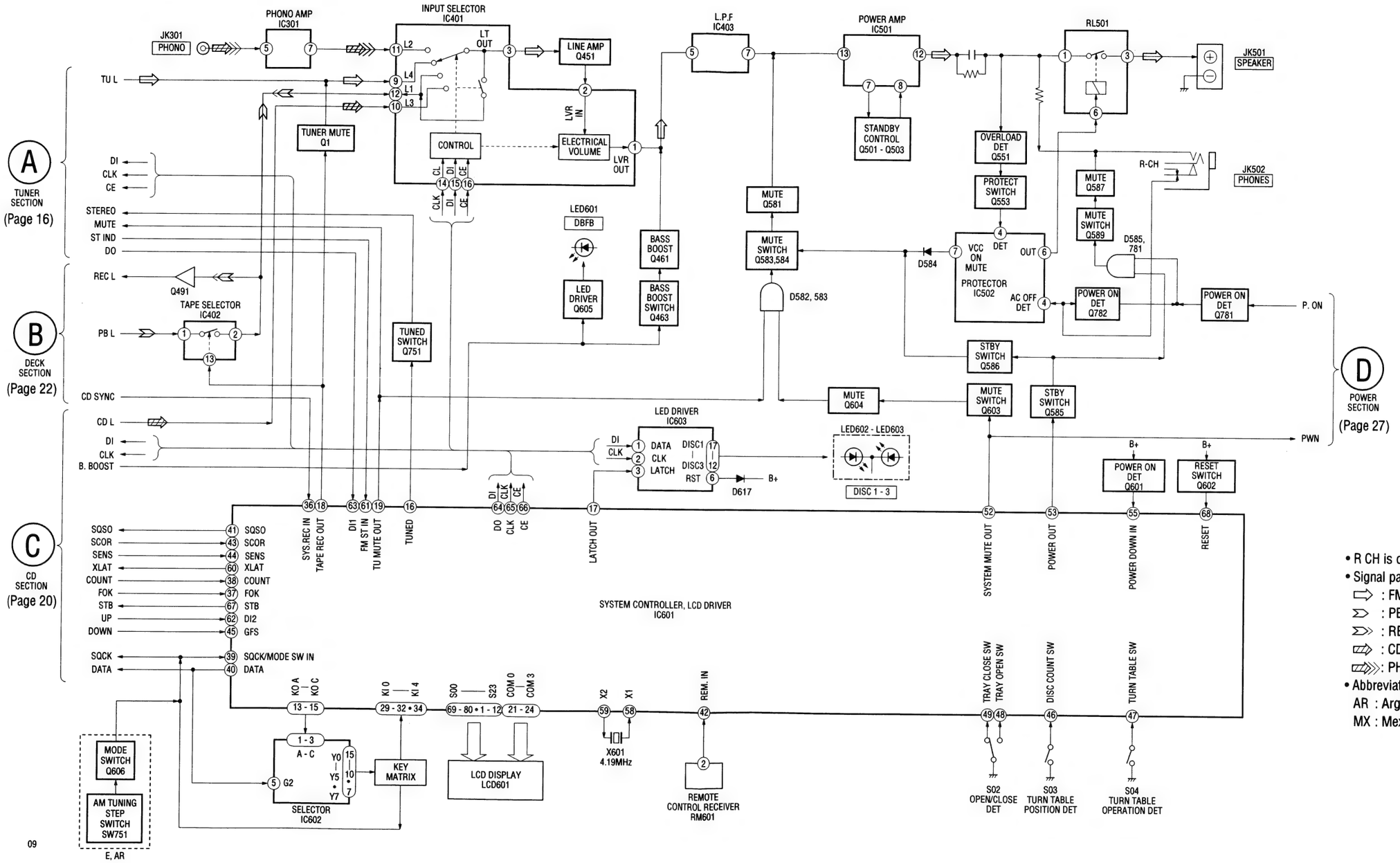
— CD SECTION —


OPTICAL PICK-UP BLOCK
DETECTOR
A
C
B
D
E
F
B+
LASER DIODE
PD
LD
APC Q01
LD ON Q02
FOCUS TRACKING
RF LEVEL
CN12
VR01
VC
ATSC
FEO
FEBIAS
2-AXIS DEVICE
TRACKING COIL
FOCUS COIL
TRACKING COIL DRIVE
FOCUS COIL DRIVE
FOCUS/TRACKING SERVO, RF AMP IC01 (1/2)
PD1
PD2
E
F
LD
PD
RF O
TEO
CN2
VC
EI
VR02
FOCUS GAIN
CLK
XLT
DATA
SENS
C. OUT
FOK
XRST
FE O
FE M
TA O
TA M
VO3(+)
VO3(-)
VIN3
VO4(+)
VO4(-)
VIN4
FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED MOTOR DRIVE IC03
SLED SERVO IC01 (2/2)
M102 SLED MOTOR
M101 SPINDLE MOTOR
VO2(+)
VO2(-)
SLED MOTOR DRIVE
VIN2
VO1(+)
VO1(-)
SPINDLE MOTOR DRIVE
VIN1
SL O
SL M
SL P
OP OUT
IN -
MUTE
DIGITAL SIGNAL PROCESSOR, D/A CONVERTER, DIGITAL FILTER IC04
RF
DIGITAL PLL
EFM DEMODULATOR
D/A INTERFACE
DIGITAL FILTER + 1BIT DAC
NLPWM
LPWM
SUB CODE PROCESSOR
CLKO
XLTO
DATO
SEIN
CNIN
FOK
SERVO AUTO SEQUENCER
CPU INTERFACE
XLON
XRST
DIGITAL CLV
CLOCK GENERATOR
MDP
SPOA
XTAO
XTA1
MUTE
S05 LIMIT SWITCH
XLT01 33.8688MHz
MIX AMP IC05
CD L
DATA
SQCK
CLOK
SQSO
SCOR
SENS
XLAT
COUNT
FOK
DI
CLK
STB
B. BOOST
UP
DOWN
C
MAIN SECTION
(Page 23,25)
M103 TURN TABLE MOTOR
TURN TABLE MOTOR DRIVE Q10,11,14,15
TURN TABLE MOTOR DRIVE CONTROL Q13
T.T+
T.T-
DOWN
M104 TRAY MOTOR
TRAY MOTOR DRIVER Q06 - Q09
TRAY +
TRAY -
XRST
TRAY/TABLE MOTOR DRIVER, REG CONTROL IC02
B.BOOST
DATA I
CLOK
STB
CONTROL
UP
MUTE
CONTROL
MUTE
E
POWER SECTION
(Page 27,28)
S01 OPTICAL PICK-UP UP/DOWN DET
UP
DOWN
• R CH is omitted
• Signal path
: CD
09

— DECK SECTION —



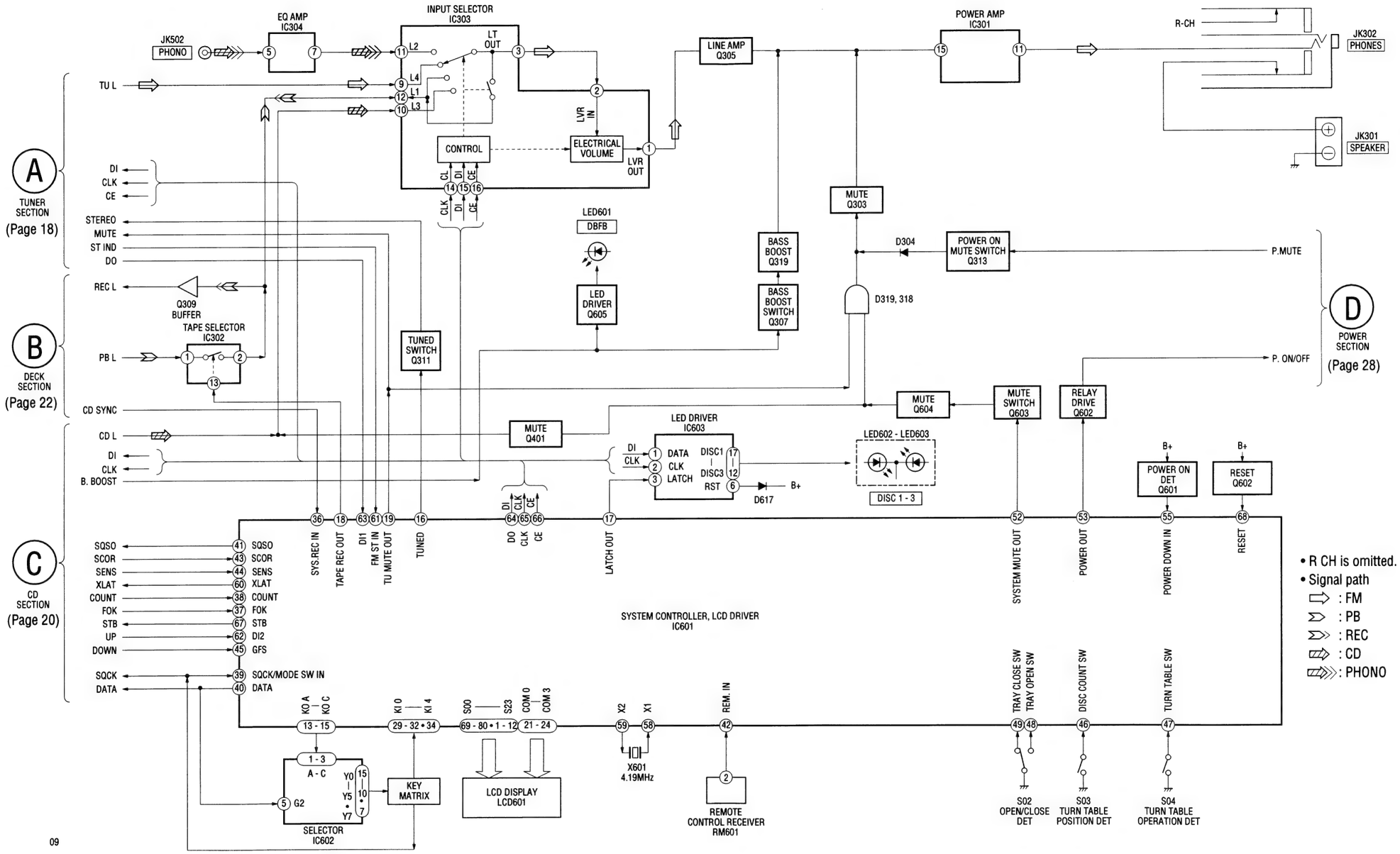
— MAIN SECTION — (E, AR, MX models)



- R CH is omitted.
- Signal path
  - ⇨ : FM
  - ⇨ : PB
  - ⇨ : REC
  - ⇨ : CD
  - ⇨ : PHONO
- Abbreviation
  - AR : Argentine model.
  - MX : Mexican model.

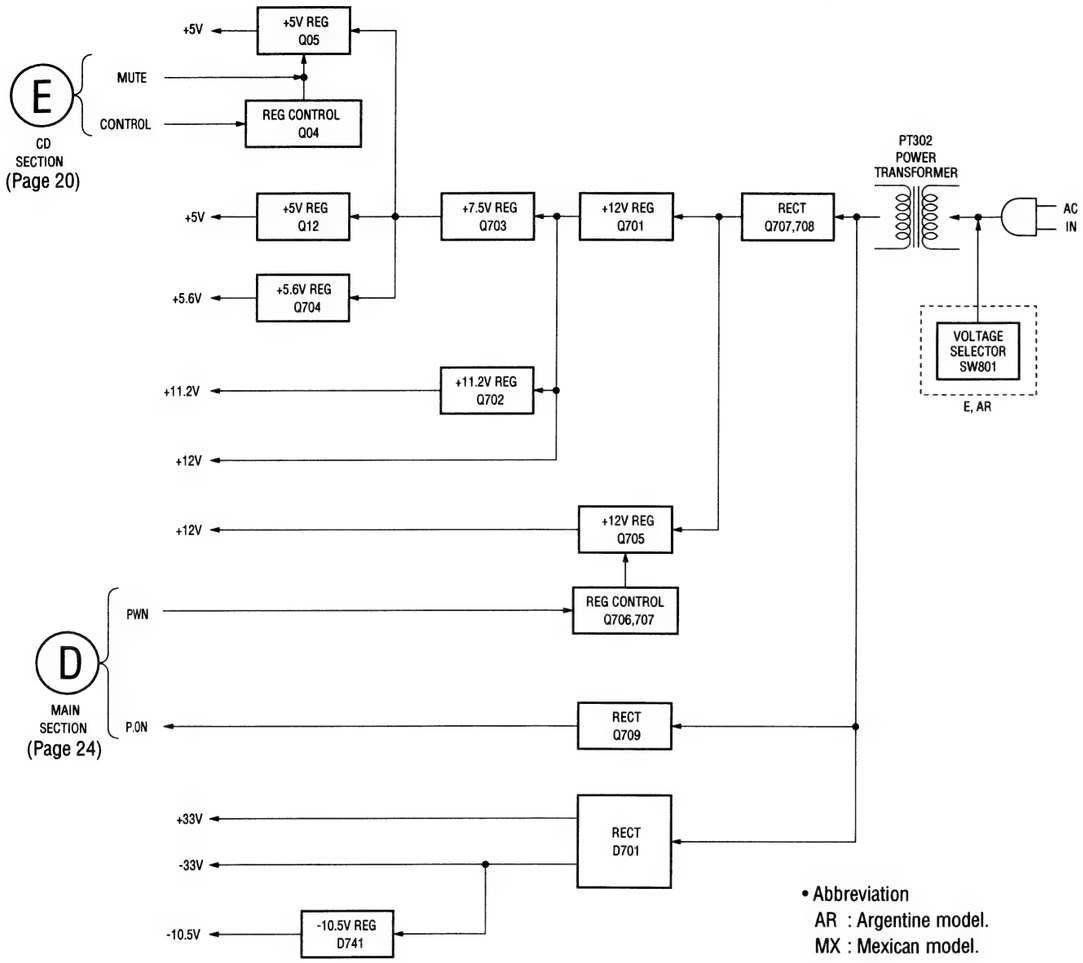
09

— MAIN SECTION — (AEP, UK models)



09

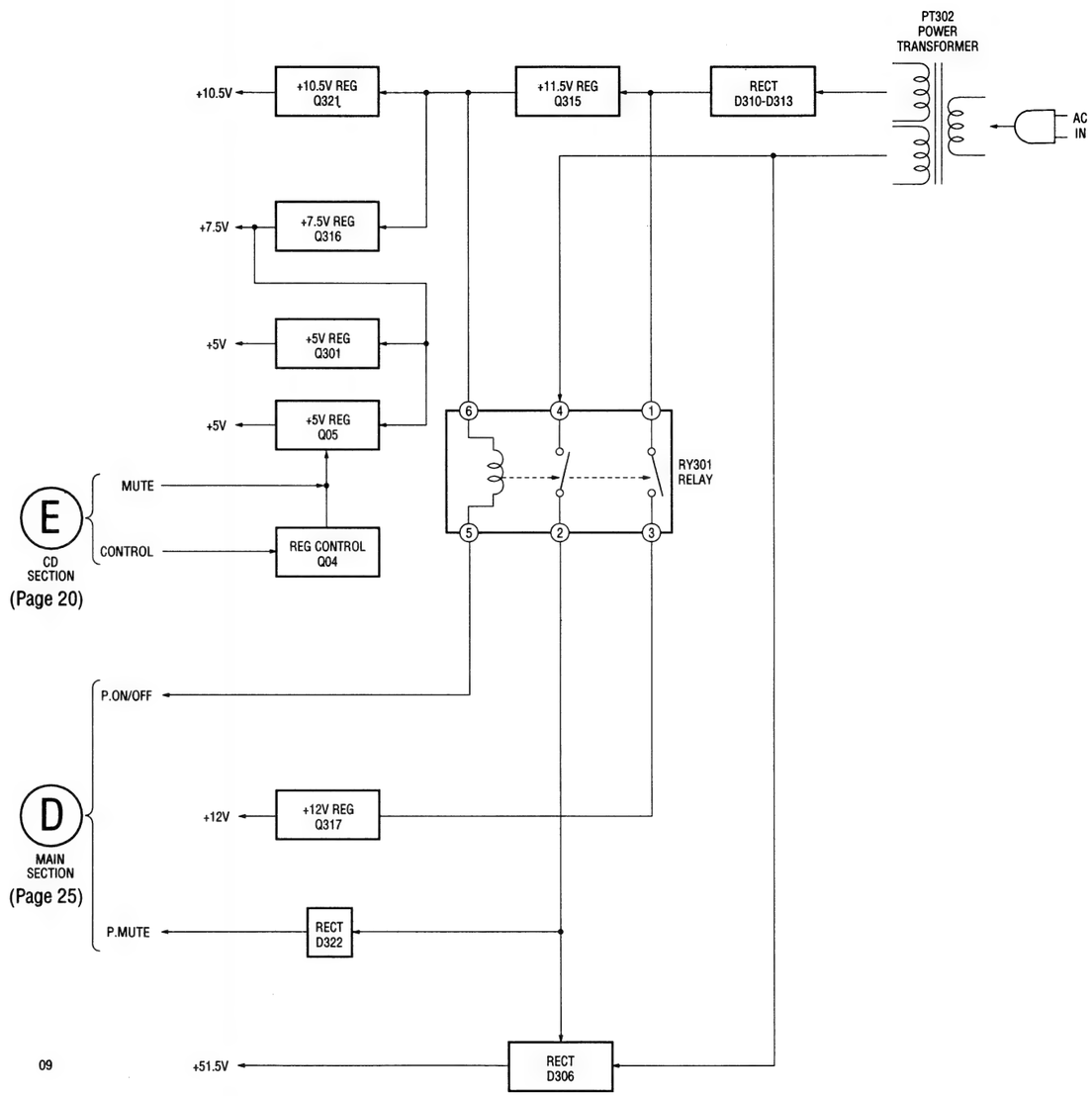
— POWER SECTION — (E, AR, MX models)



• Abbreviation
AR : Argentine model.
MX : Mexican model.

09

— POWER SECTION — (AEP, UK models)

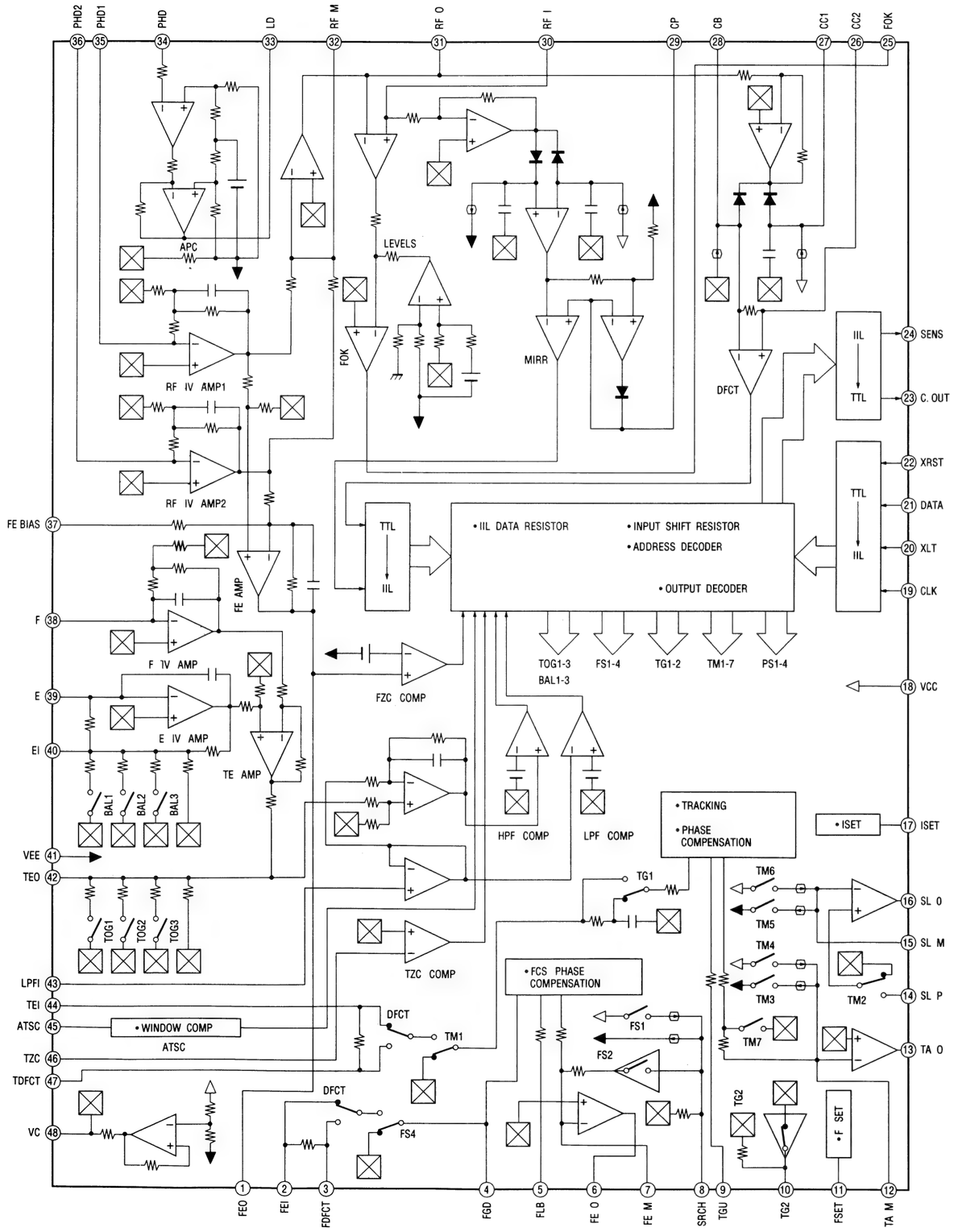


09

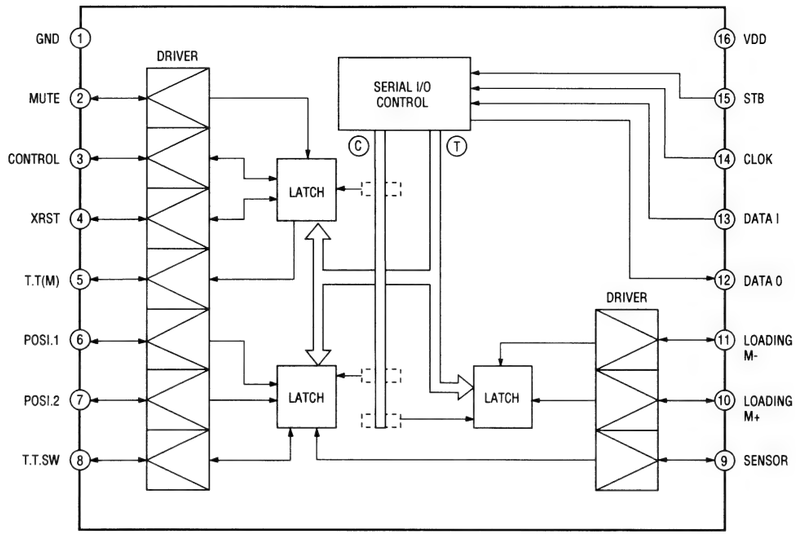
5-3. IC BLOCK DIAGRAMS

— CD SECTION —

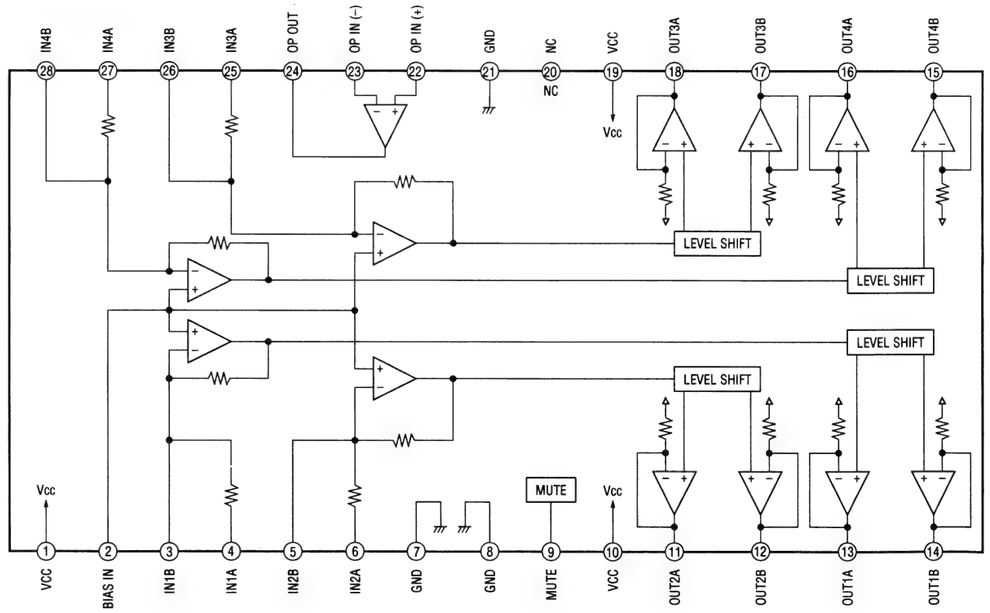
IC01 CXA1782BQ



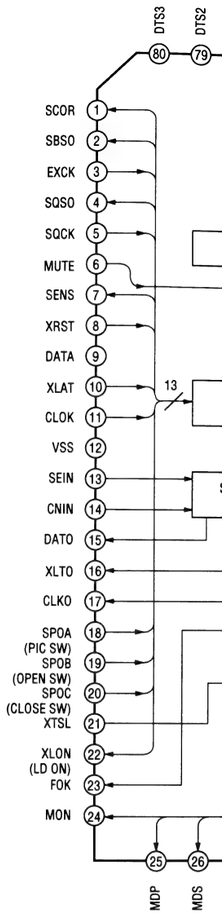
IC02 TC9173P



IC03 BA5941FP

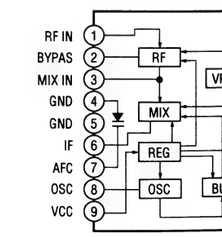


IC04 CXD250

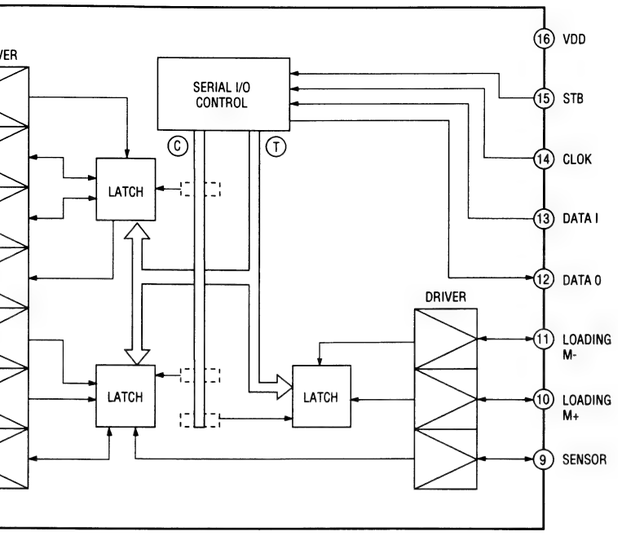


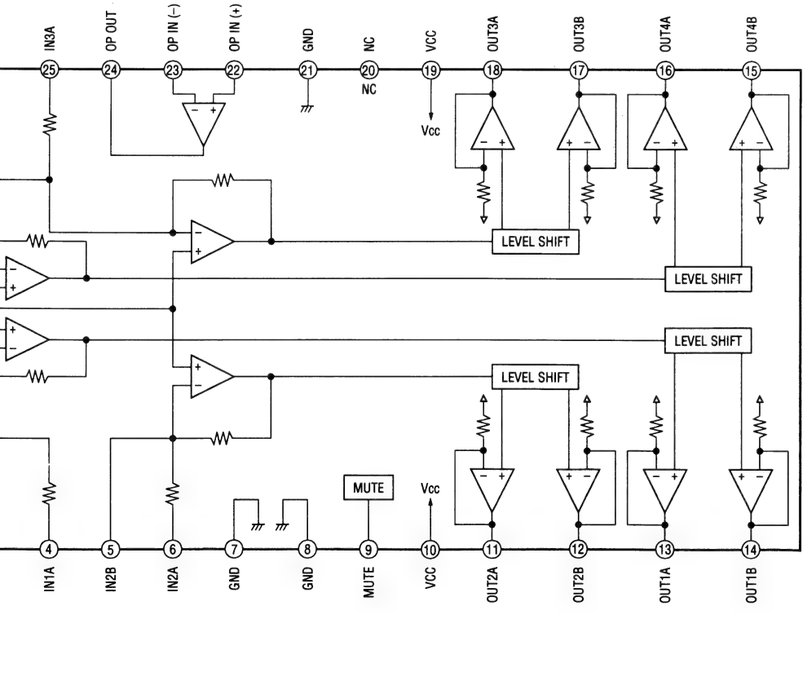
— TUNER SECTION —

IC101 LA1186

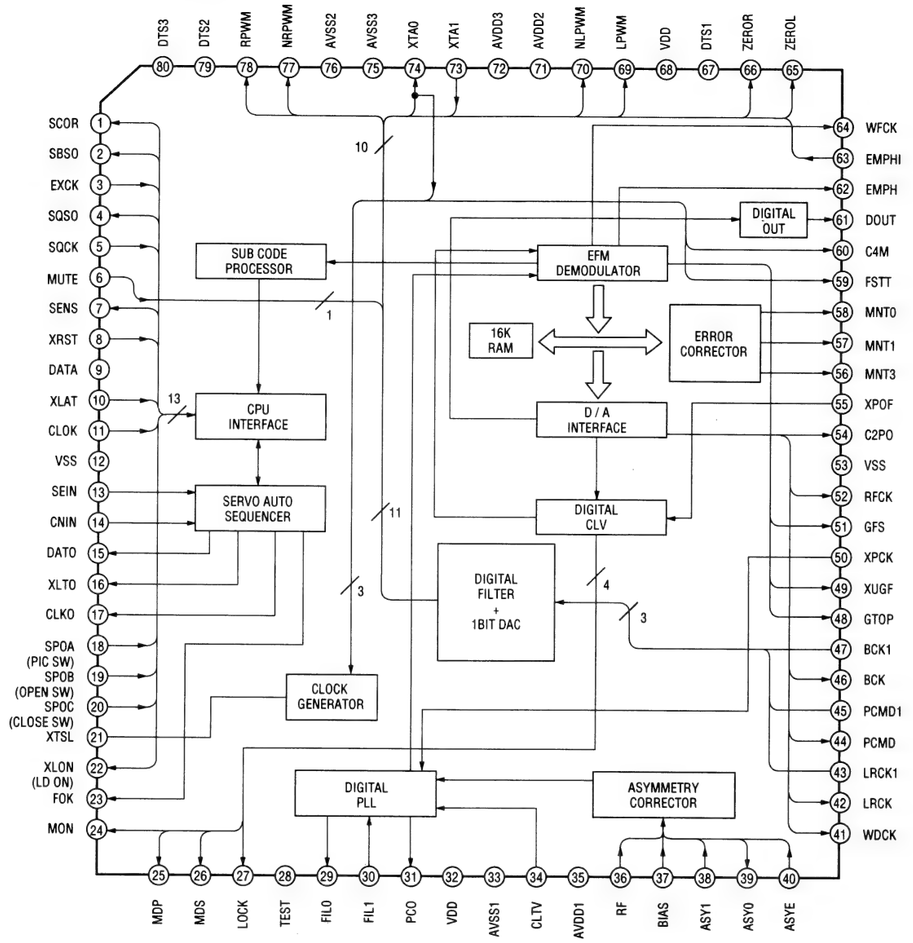


73P



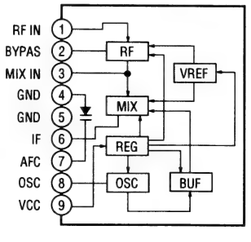


IC04 CXD2508Q

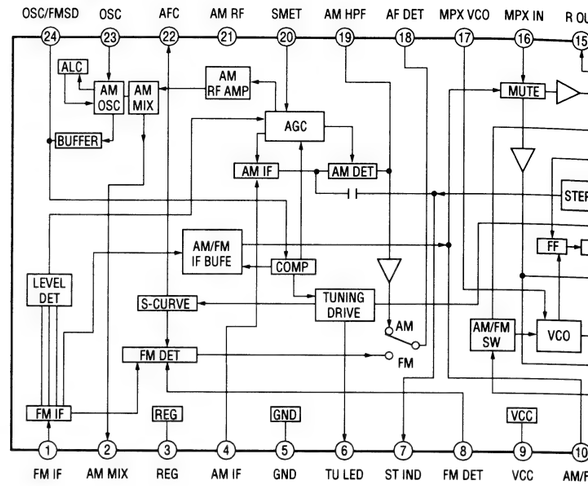


— TUNER SECTION —

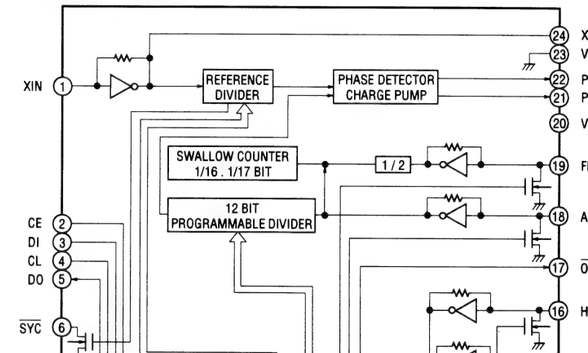
IC101 LA1186N



IC102 LA1831

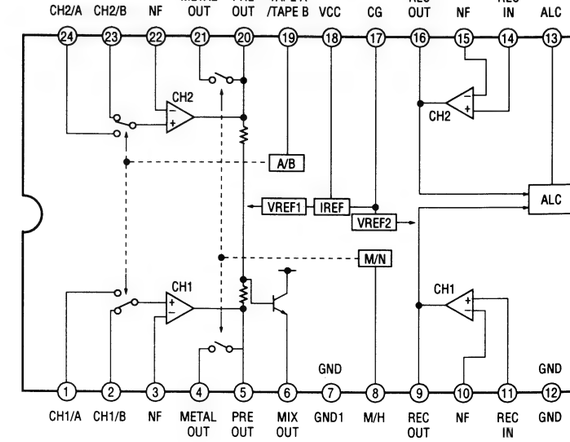


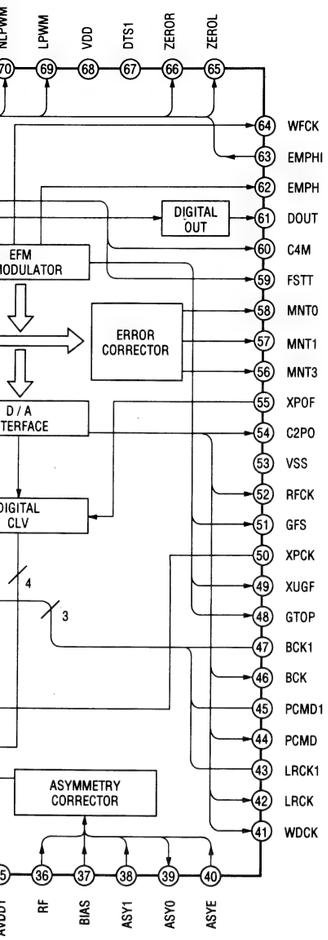
IC201 LC7218



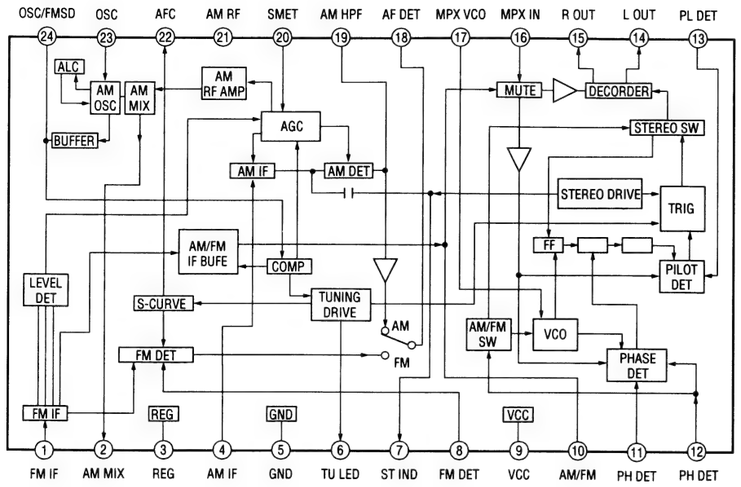
— MAIN SECTION —

IC201 TA8189N

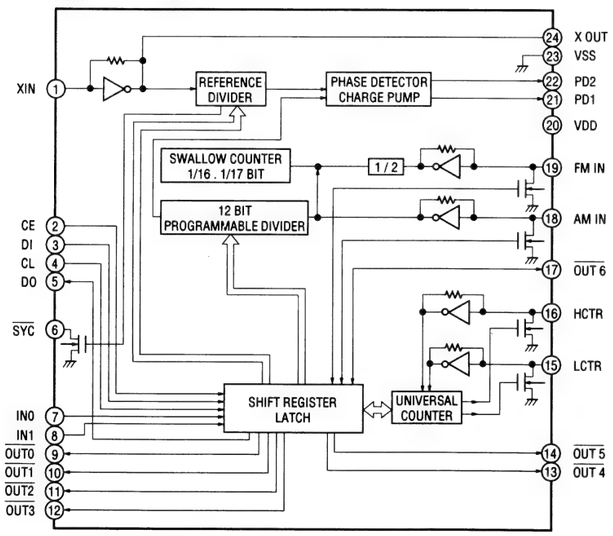




IC102 LA1831

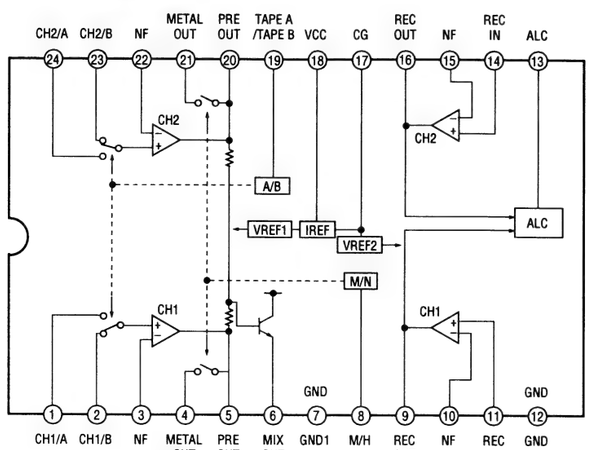


IC201 LC7218

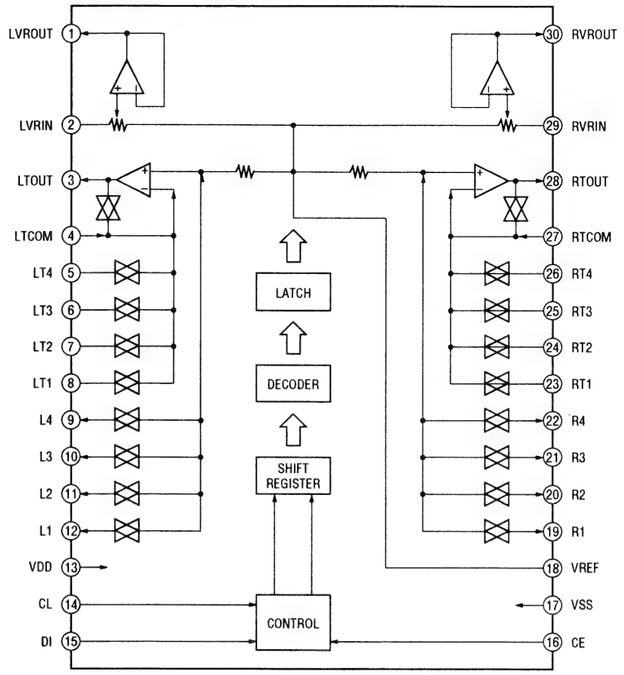


— MAIN SECTION —

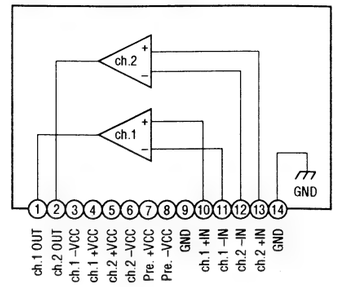
IC201 TA8189N



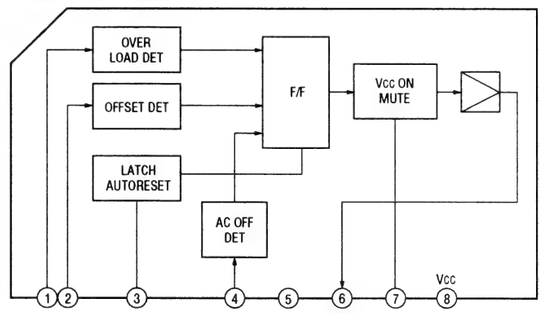
IC303, 401 LC75392



IC501 STK405-070A

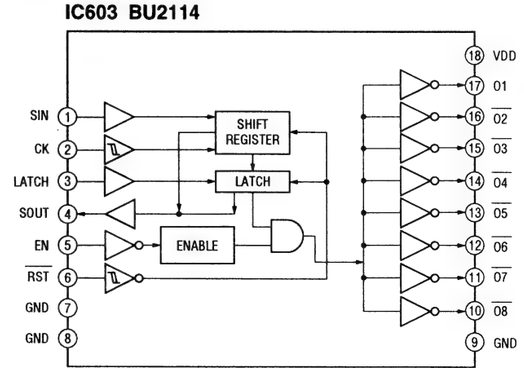


IC502 uPC1237HA



— PANEL SECTION —

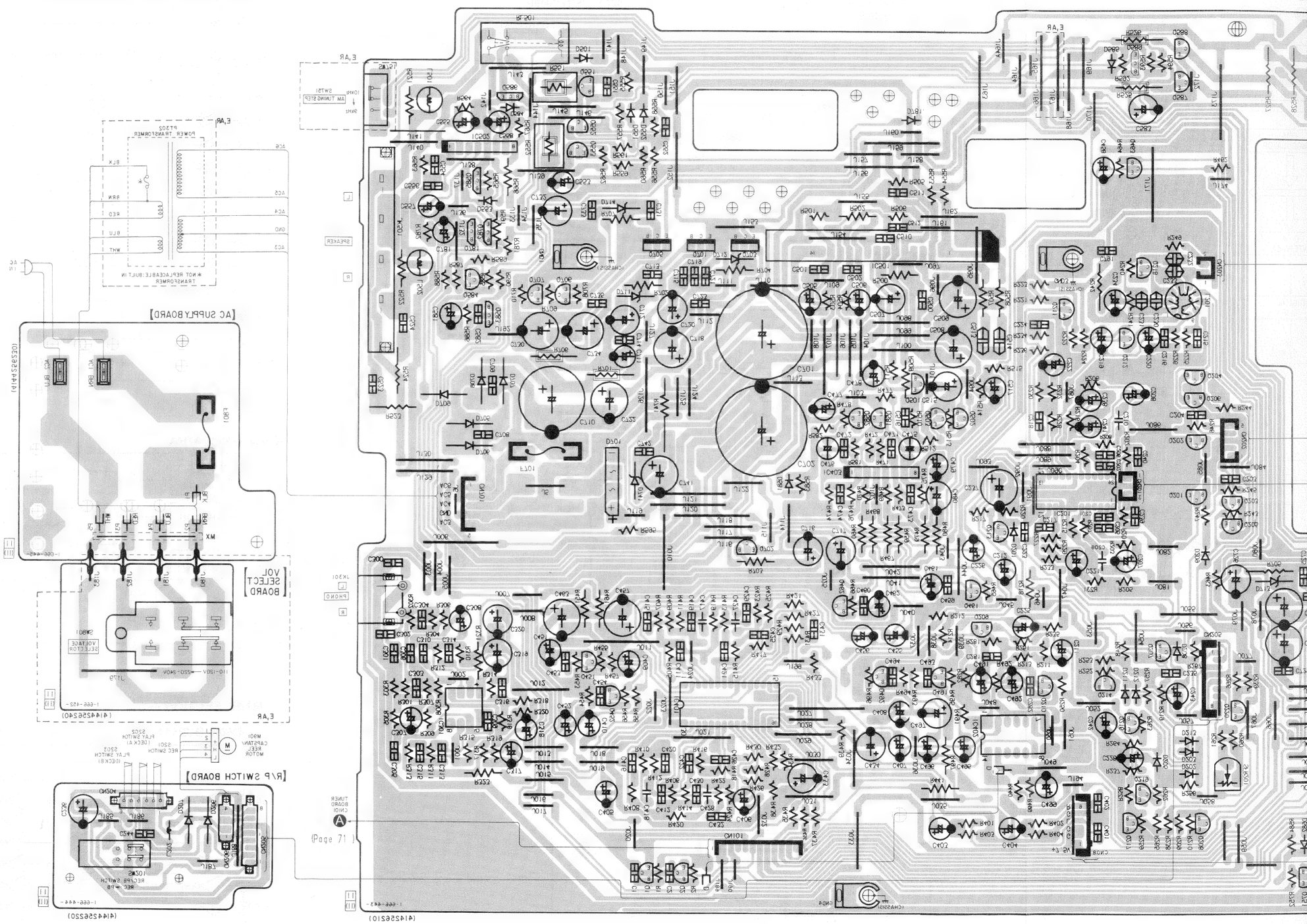
IC603 BU2114



5-4. PRINTED WIRING BOARD — MAIN SECTION — (E, AR, MX, models)

• See page 14 for Circuit Boards Location.

(Conductor Side) Note : Conductor side equal an inversion of component side.

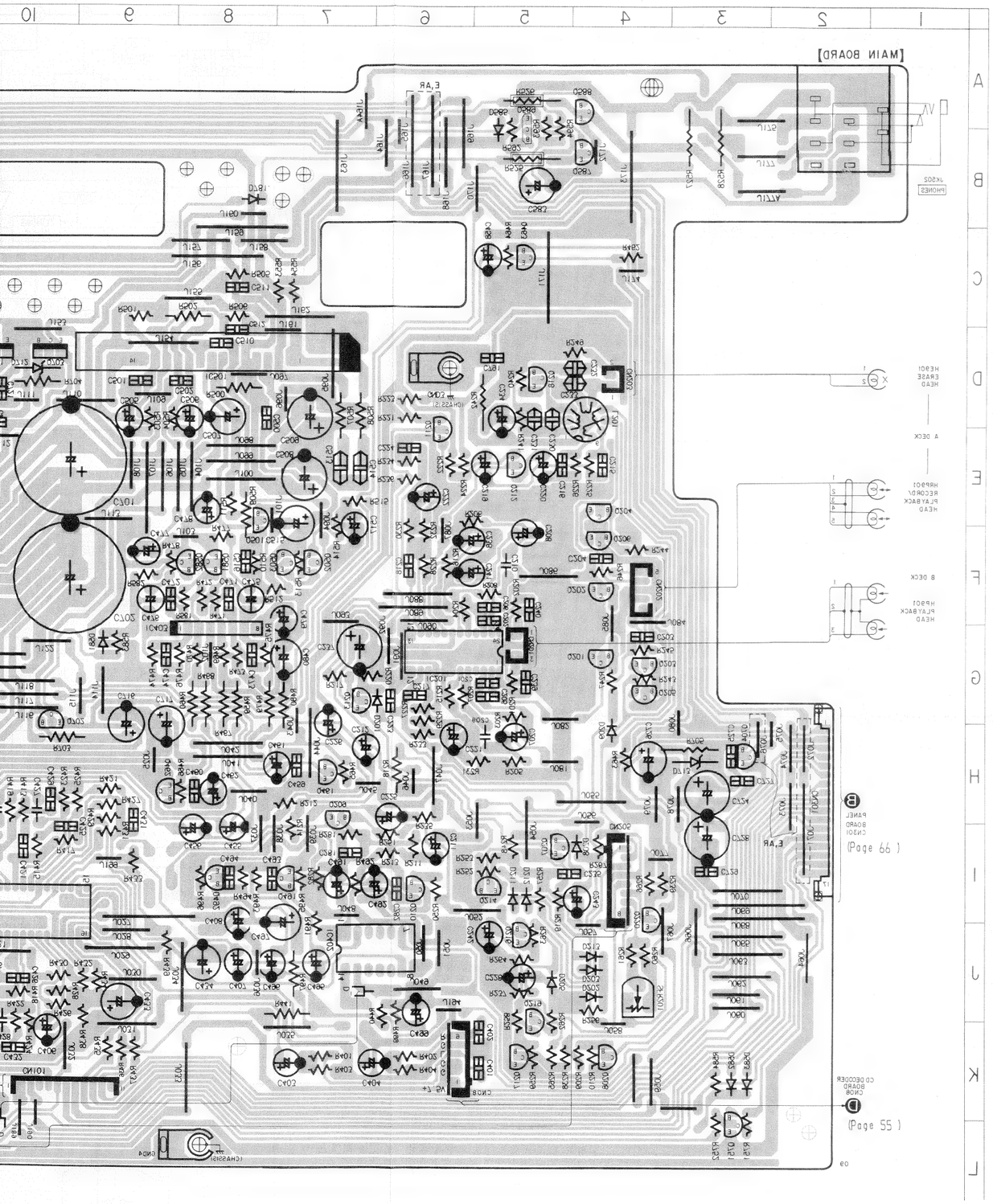


• Semiconductor Location

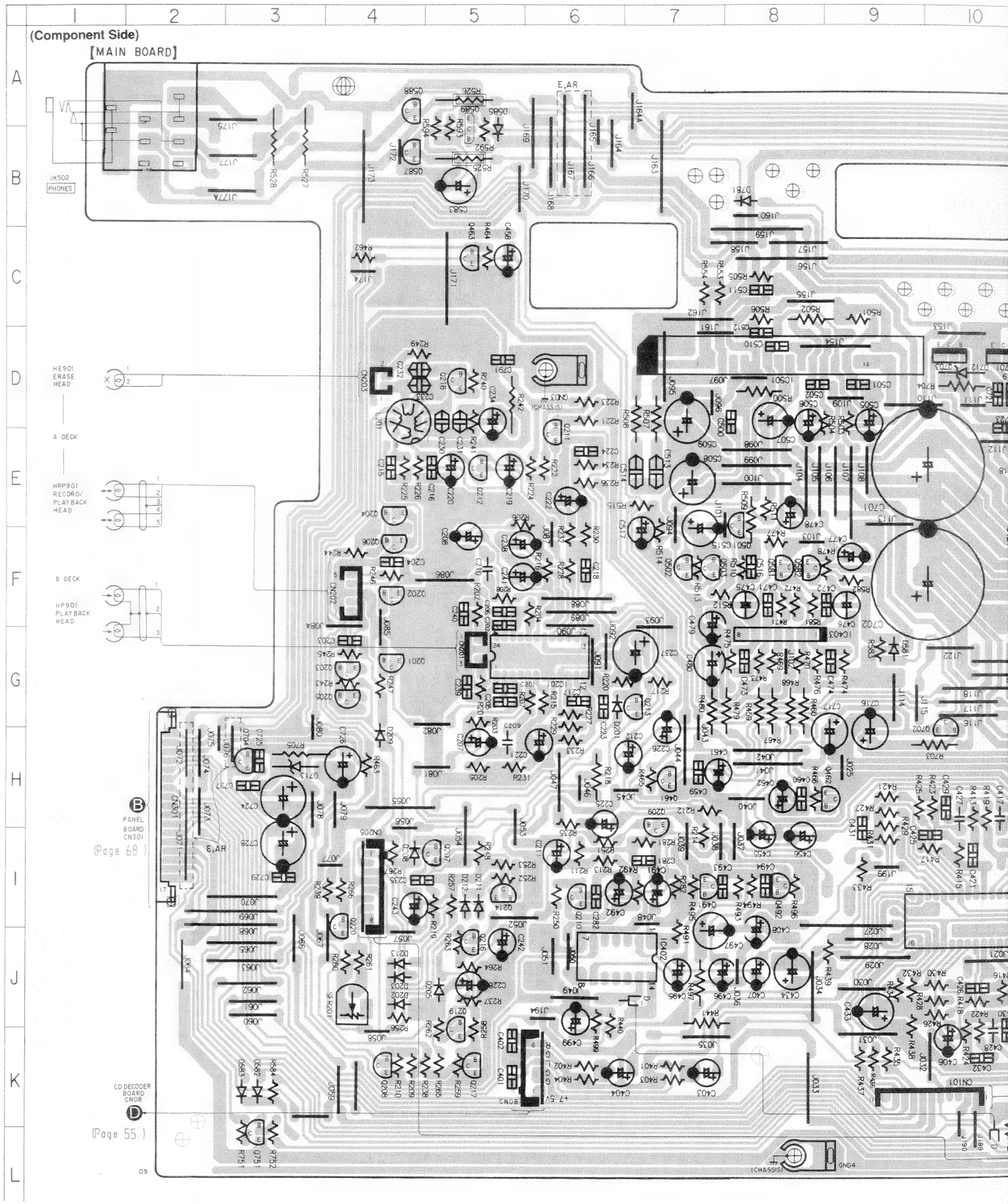
Ref. No.	Location	Ref. No.	Location
D201	G-6	Q205	G-4
D202	J-4	Q206	F-4
D203	J-4	Q207	I-5
D205	J-5	Q208	K-4
D206	K-16	Q209	H-7
D207	K-17	Q210	I-6
D208	I-4	Q211	E-5
D209	H-4	Q212	E-5
D211	I-5	Q213	G-7
D212	I-5	Q214	I-5
D213	J-4	Q216	J-5
D501	A-12	Q217	K-5
D551	B-11	Q218	D-5
D552	B-11	Q219	J-5
D553	C-13	Q220	I-4
D581	G-9	Q451	I-12
D582	K-3	Q452	I-11
D583	K-3	Q461	H-7
D584	B-13	Q462	H-9
D585	A-5	Q463	C-5
D701	F-11	Q491	I-7
D705	F-13	Q492	I-8
D706	F-13	Q501	F-8
D707	E-13	Q502	F-7
D708	E-13	Q503	F-7
D709	F-13	Q551	B-12
D711	D-11	Q552	B-12
D712	D-10	Q553	C-12
D713	H-3	Q581	F-8
D714	C-11	Q582	F-8
D741	G-11	Q583	E-13
D781	B-8	Q584	D-13
		Q585	C-13
IC201	G-6	Q586	B-13
IC301	I-13	Q587	B-4
IC401	I-11	Q588	A-4
IC402	J-7	Q589	B-5
IC403	G-9	Q701	D-10
IC501	D-8	Q702	G-9
IC502	B-13	Q703	D-10
		Q704	H-3
Q1	L-11	Q705	D-11
Q2	L-10	Q706	D-12
Q201	G-4	Q707	D-12
Q202	F-4	Q751	L-3
Q203	G-4	Q781	D-13
Q204	E-4	Q782	D-13

Note:

- ○—— : parts extracted from the component side.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

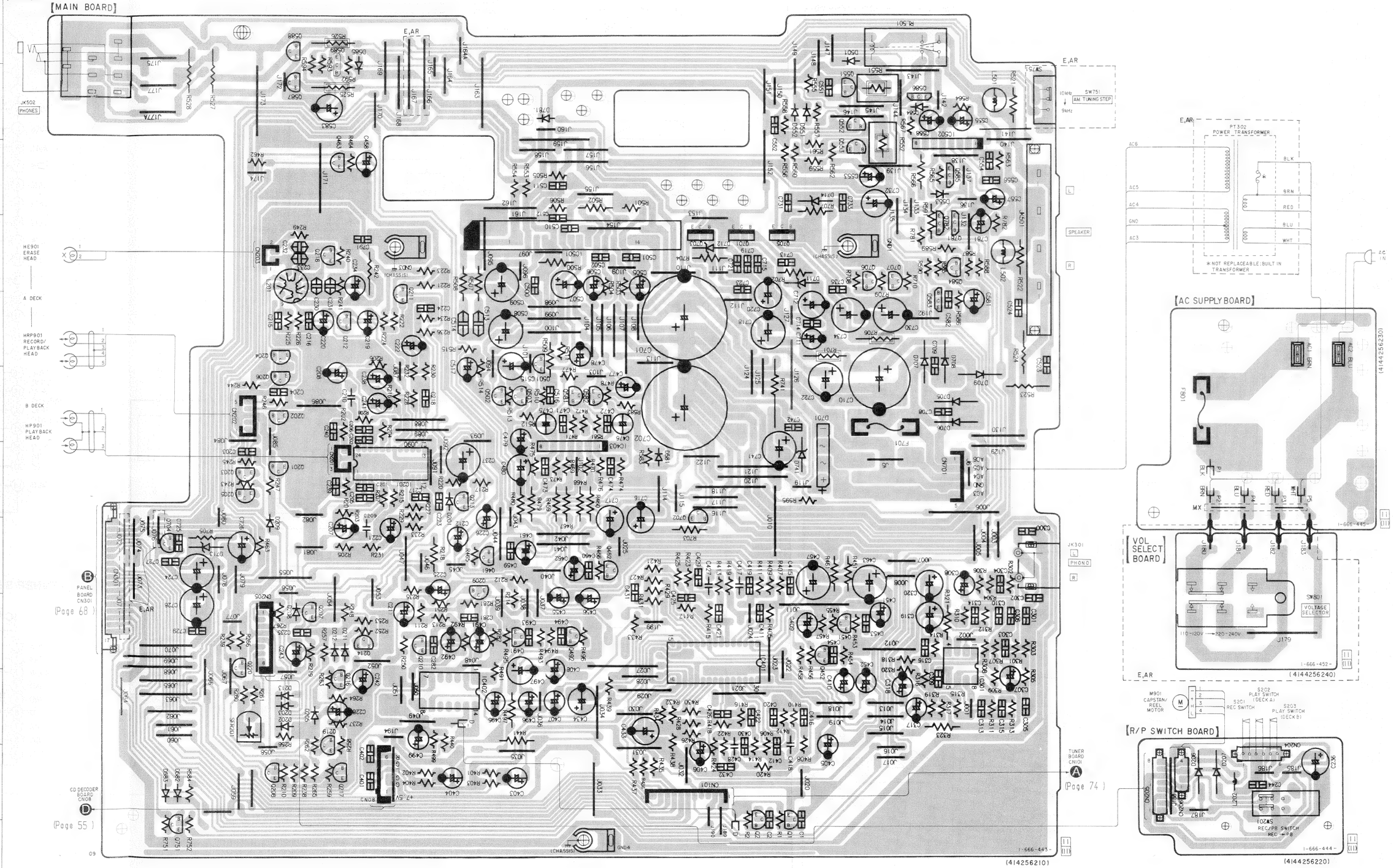


(Component Side)



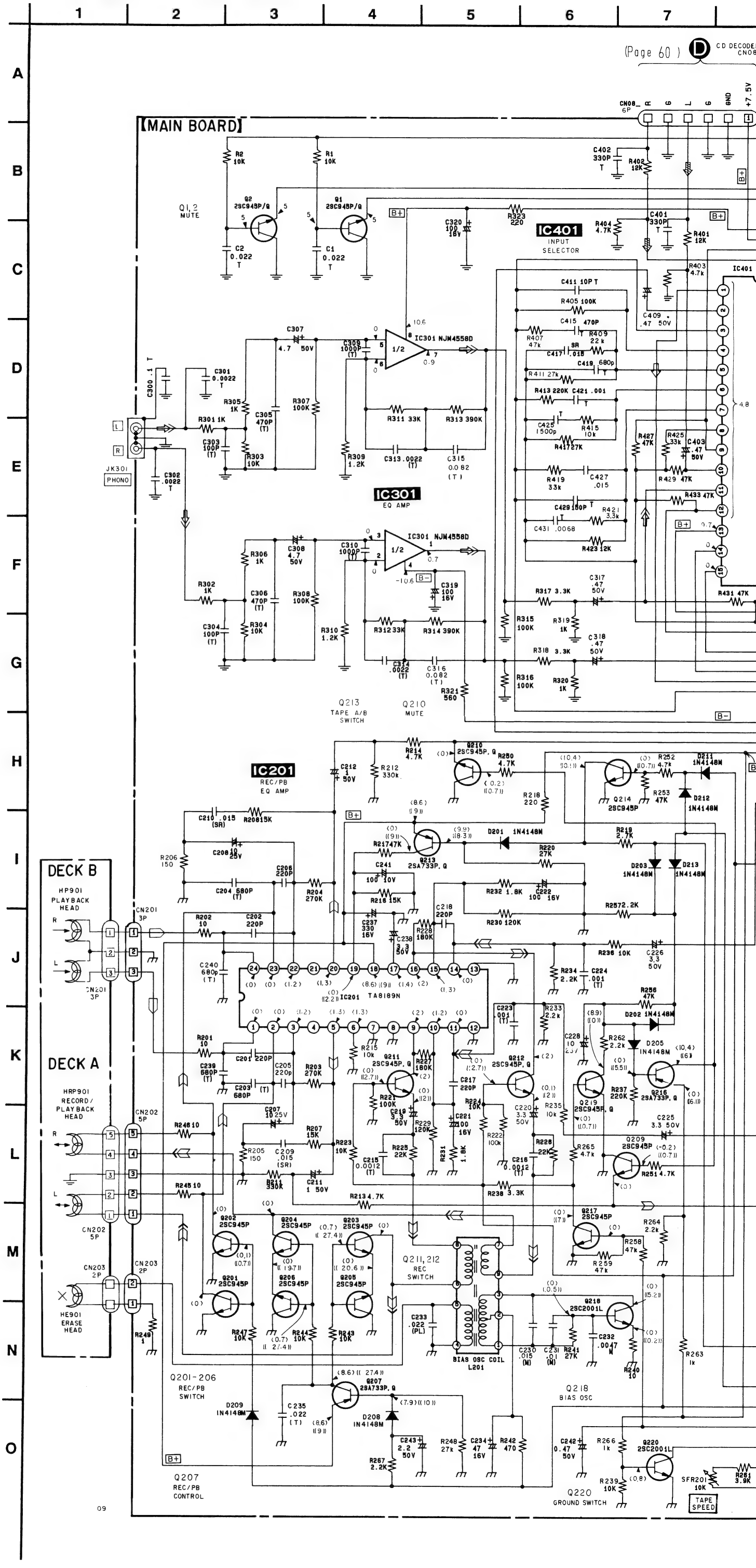
(Component Side)

【MAIN BOARD】



5-5. SCHEMATIC DIAGRAM — MAIN SECTION — (E, AR, MX, models)

• See page 32 for IC Block Diagrams.



Note:

- All capacitors are in μF unless noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- : nonflammable resistor.
- : panel designation.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- B- : B- Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  < > : PB
  (( )) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK A)
  : CD
  : PHONO
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

60) D CD DECODER BOARD CN08 — A TUNER BOARD CN101 (Page 77) — B PANEL BOARD CN301 (Page 61)

CN101 11P — CN301 17P

E,AR
AM TUNING STEP
9KHz◄10KHz
SW751

R752 33k
R751 10K
D582 IN4148M
D583 IN4148N
Q751 2SC945P/Q
Q751 TUNED SWITCH

IC401 LC75392
IC402 TC4066
IC402 TAPE SELECTOR
IC403 NJM4558L
IC403 BUFFER
IC403 NJM4558L_A
IC501 STK-405-70A
IC501 POWER AMP

Q705 +12V REG
Q706,707 REG CONTROL
Q704 +5.6V REG
Q702 +11.5V REG
Q701 +12V REG
Q781,782 POWER ON DET
Q208 CD SYNCHRO SWITCH
Q214 TAPE A SWITCH
Q216 MUTE SWITCH
Q209,219 MUTE
Q217 REC SWITCH
Q451,452 LINE AMP
Q491,492 BUFFER
Q308,309 BUFFER
Q581,582 MUTE
Q461,462 BASS BOOST
Q463 BASS BOOST SWITCH
Q501-503 MUTE
Q583,584 MUTE SWITCH

D711 MTZJ-12B
D714 MTZJ-12B
D741 MTZJ-12B
D713 MTZJ -6.2B
D781 IN4148M
D211 1N4148M
D212 1N4148M
D213 1N4148M
D551 IN4148M
D552 IN4148M
D709 1N4002

SFR201 10K
TAPE SPEED
CN205 8P
A
VCC
PLAY SW
REC B+
DUB B+
GND SW
H
L

GND2
GND1
GND3

15 16 17 18 19 20 21 22 23 24 25 26

E,AR

AM TUNING STEP
9KHz⇔10KHz
SW751

Q751
TUNED
SWITCH

E,AR

[VOL SELECT BOARD]

110V
120V
220V
240V
J180
J181
J182
J183
SW801
VOLTAGE SELECTOR

[AC SUPPLY BOARD]

P1 BLK
P2 BRN
P3 RED
MX
P4 BLU
P6 WHT
F801
T3.15AL 250V
AC1
AC2
AC IN

R710
6.8K

Q706,707
REG
CONTROL

Q705
2SD882P
R707
680
C731
0.022
R708
10K
Q706
2SA733P/Q
R709
10K
C733
0.022
C732
100
16V
Q707
2SC945P/Q

C730
470
25V
R706
1
1W
RSS
C729
0.022
T

Q704
2SC2001L
C725
0.022
T
R705
330
C728
100
16V
D713
MTZJ
-6.2B
C727
0.022
T
C726
100
16V
C724
100
16V

Q704 +5.6V REG

Q703
2SD882P
C719
0.022
T
R704
470
C722
470
16V
C723
0.022
T
D712
MTZJ
-8.2B
C721
0.022
T
C720
100
16V
C718
470
16V

Q703 +7.6V REG

D708 1N4002L
D707 1N4002L
D706 1N4002L
D705 1N4002L
C709 0.022 T
C708 0.022 T

F701
T2AL 250V

AC6
AC5
AC4
GND
AC3
CN701
5P

BLK
BRN
RED
BLU
WHT
PT302
POWER
TRANSFORMER

* NOT REPLACEABLE:
BUILT IN TRANSFORMER

Q702 2SC2001L
R703
1K
C716
100
16V

Q702
+11.5V REG

Q701 2SD882P
C713
0.022
T
R702
330
R701
1
1W
RSS
C711
47
25V
C715
0.022
T
C714
0.022
T
C712
100
16V
C710
2200
25V

D711
MTZJ-12B

Q701
+12V REG

D709
1N4002

D701
6BU4D

Q587,588
MUTE

C702 3300 50V
C701 3300 50V

C742
0.022
T
C741
470
16V
D741
MTZJ-12B
R741
1k
2W
RSS

R781
10K
Q781
DTC124ES
D781
1N4148M
Q782
DTC124ES
R782
10k
C781
1
50V

781,782
OWER ON
DET

C500
0.1
T

Q589
MUTE SWITCH
Q589
DTA144ES
R592
100k
C583 100
16V
D585
1N4148N

R525 270 1W
R527 68 1/2W
R595
100k
R593 3.3k
Q587
2SC2878
R594 3.3k
Q588
2SC2878
R526 270 1W
R528
68 1/2W

JK502
PHONES

IC501
POWER AMP

IC501
STK-405-70A

R523 10
1/2W
C523
0.1 T
R521 1/2W 4.7
L501
1UH
RL501
R522
4.7 1/2W
L502
1UH
R524 C524
10
1/2W
0.1
T

JK501
SPEAKER
L
R

R551 0.1 2W
R500
100
C508
220
50V
R555
2.2k
R507
4.7
1/2W
C513
0.1
R553
100k
C551
0.022 T
R557
15k
D551
1N4148M
Q551
2SC1841
R552 0.12W
R556
2.2k
C552
0.022 T
R558
15k
D552
1N4148M
Q552
2SC1841
R554
100k

D501
1N4148M

R566 1K
R567
56k
C558
100 16V
R563
10k
C564
.01
T
IC502
UPC1237HA
C555
100
16V
C556
.0022
R564
100K
R562
47k

IC502
PROTECTOR

R565
4.7k
D553
1N4148M
C557
4.7
50V

Q551,552
OVER LOAD DET

Q553
PROTECT SWITCH

D584
1N4148M

Q585,586
STANDBY
SWITCH

C507
100
50V
C509
220
50V
C510
0.1
T
R505
56K
C511 4.7P T
R506
56K
C512
4.7P
T
R508
4.7
1/2W
C514
0.1
M
C502
2200P
T
R503
2.7K
R504
2.7K
C505
10
25V
C506
10
25V

R509
100
Q501
2SC945P/Q
R510
10K
C516
0.1
T
Q502
2SC945P/Q
Q503
2SA733P/Q
R511
10K
R512
10K
R513
15K
R514
1K
R515
1K
C517
100
50V

Q501-503
MUTE

C561
47
16V
R590
15K
Q584
2SA733P/Q
R586
15K
C562
0.1
T
Q583
DTC114ES
R589
27K
R587
18K
R588
56K

Q583,584
MUTE SWITCH

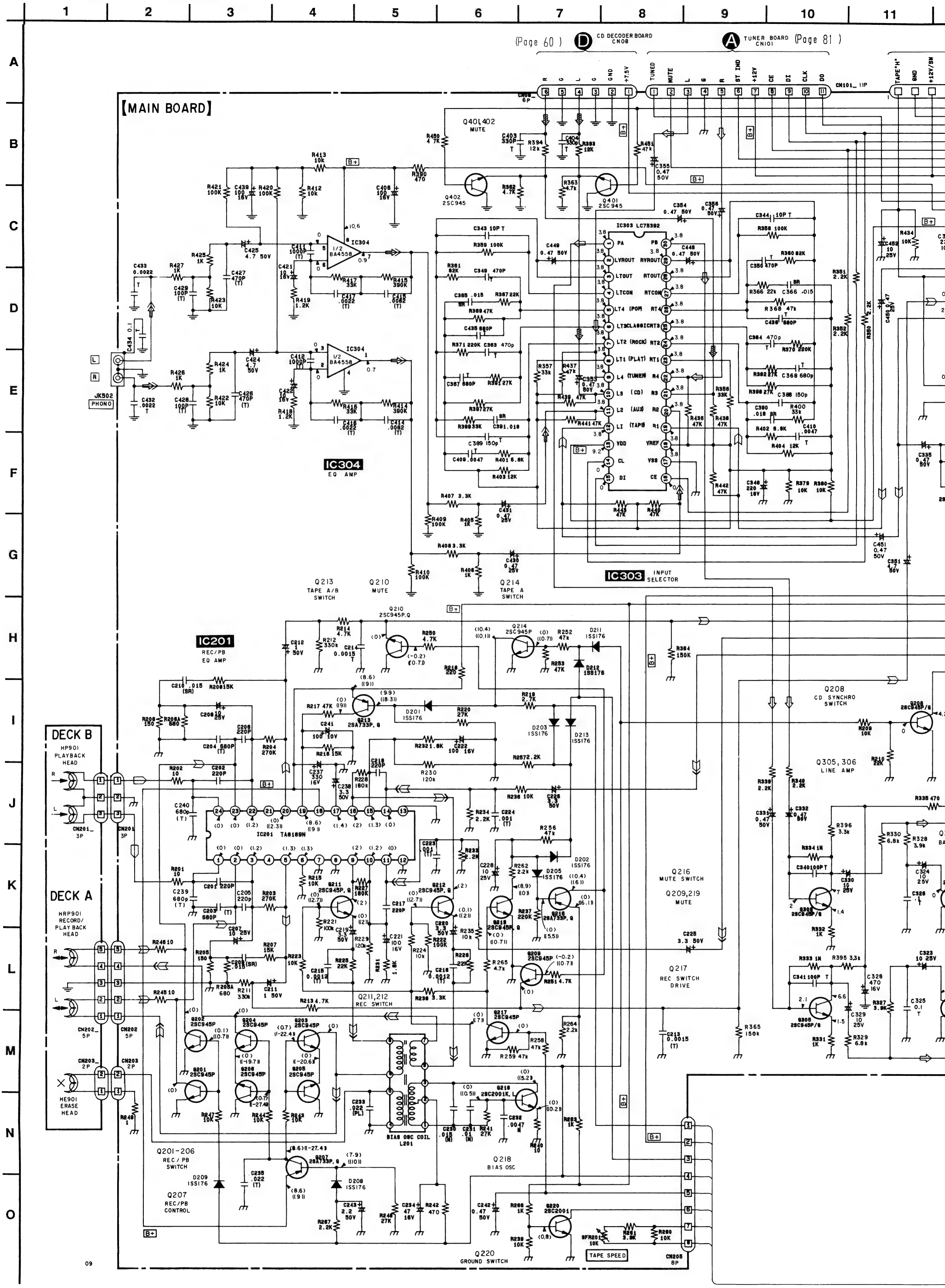
R591 4.7k
Q585
DTC124ES
Q586
DTC124ES

[R/P SWITCH BOARD]

CN204
6P
CN204
6P
L202 470UH
C236
220
16V
C244
0.022
(T)
S201
REC SWITCH
(DECK A)
S202
PLAY SWITCH
(DECK A)
PLAY SWITCH
(DECK B)
REC
PLAY
SW201
REC/PB SWITCH
D208
1N4002
D207
1N4002
CN206
4P
CN206
4P
M901
REEL
CAPSTAN
MOTOR
CN205
8P

5-6. SCHEMATIC DIAGRAM — MAIN SECTION — (AEP, UK models)

• See page 32 for IC Block Diagrams.



e 81)

PANEL BOARD CN301 (Page 61)

CN101_ 11P

CN301 17P

TAPE"H" GND +12V/SW POWER CE CLK DO DI ST/IN TU MUTE SYNC REC MUTE GND +5.6V S.BASS TUNED

Q311 TUNED SWITCH

D319 1SS176

D318 1SS176

R432 10K

Q311 2SC945P/Q

R433 47K

R430 33K

Q317 +12V REG

Q301 +5.6V REG

Q316 +7.5V REG

R434 10K

C345 220 10V

R346 4.7k

R353 220

C452 10 25V

R347 10K

R452 1k

R351 2.2K

R352 2.2K

R350 2.2K

C450 0.47 25V

IC302 TC4066

IC302 TAPE SELECTOR

C342 100 10V

C334 0.47 50V

D401 1SS176

R388 15k

Q317 2SD882P

Q301 2SC2001L

Q316 2SD882P

C386 0.022 T

C387 470 16V

C363 0.022 T

R384 680

C382 470 25V

D316 UZ12B

C364 0.022 T

C385 470 16V

R389 1 2W

C447 0.022 T

C444 100 16V

C446 0.022 T

D301 UZ6.2B

C445 0.022 T

R435 330

C443 100 16V

C442 100 16V

C380 0.022 T

C381 470 16V

C377 0.022 T

D314 UZ6.2B

C378 0.022 T

R383 470

C379 100 16V

C376 470 16V

Q321 2SC2001L

R385 1K

C438 220 16V

C437 100 16V

Q321 +10.5V REG

Q315 2SD882P

Q315 +11.5V REG

R382 330

R381 1 2W

C405 47 25V

C373 0.022 T

C375 0.022 T

D315 UZ12B

C374 0.022 T

C372 100 16V

C371 3300 25V

R343 1M

R355 470

R344 1M

C335 0.47 50V

C333 100 10V

C339 47p T

C338 47p T

Q309 2SC945P/Q

Q308 2SC945P/Q

R341 4.7K

R342 4.7K

Q308,309 BUFFER

C451 0.47 50V

C351 4.7 50V

C352 4.7 50V

R360 10K

D304 1SS176T

R372 1K

D303 1SS176

Q313 POWER ON MUTE SWITCH

Q313 2SC945P/Q

C357 220 16V

D321 1SS176

R375 10k

RY301

F302 T2AL 250V

D312 1N4002L

D313 1N4002

D311 1N4002L

D310 1N4002L

C370 0.022 T

C369 0.022 T

17.2

CN401 4P

PT302 POWER TRANSFORMER

* NOT REPLACEABLE BUILT IN TRANSFORMER

Q208 CD SYNCHRO SWITCH

Q208 2SC945P/Q

R209 10K

R210 22K

Q305,306 LINE AMP

Q307 BASS BOOST SWITCH

Q307 2SC945P/Q

R338 100K

R337 10K

R336 100k

R373 3.3K

D302 1SS176T

Q312 RELAY DRIVE

Q312 2SC945P/Q

R374 4.7K

R376 12K

R378 10K

D322 1SS176T

C359 2.2 50V

R377 10K

C361 .01 100V CC

C362 .01 100V CC

D306 GBL02

C360 3300 63V

F301 T4AL 250V

CN401 4P

JK301

C400 0.0047 T

C399 0.0047 T

JK301 SPEAKER

L302

L301

C398 0.0047 T

C397 0.0047

C394 0.0047

C396 0.0047 T

JK302 PHONES

R324 1K

R386 390 1/2W

R387 390 1/2W

R323 1K

C395 0.0047 T

C393 0.0047 T

R335 470

R322 2.2K

Q302,303 MUTE

Q319,320 BASS BOOST

R396 3.3k

R330 6.8k

R328 3.9k

C324 10 25V

C326 .1

Q320 2SC945P/Q

R326 47k

C420 0.0022 T

C330 10 25V

R332 1K

R395 3.3k

C328 470 16V

C323 10 25V

R327 3.9K

C325 0.1 T

R325 47K

C327 10 50V

C419 0.0022 T

C329 10 25V

Q319 2SC945P/Q

R331 1K

R329 6.8k

R321 2.2K

IC301 POWER AMP

IC301 STK4412

Q302 2SC2878A

Q303 2SC2878A

C320 1 50V

C314 1 50V

C322 10 50V

C321 1 50V

C315 1 50V

R318 4.7K

R316 100K

R314 100K

R312 100K

R308 100K

R310 100K

C316 47 25V

C318 470P T

C312 0.001T

C408 470P T

C313 0.001

C319 470P T

C317 100 63V

R311 270K

R309 100K

C407 470P T

R313 100K

R317 100K

R319 4.7K

R315 100K

C402 0.001 M

C311 100 63V

R307 100 1/2W RSS

C308 47 25V

C306 1000 50V

R306 12K

R304 82

C310 220 16V

R302 4.7 1/2W

C302 0.1 M

C304 0.1 M

C309 220 16V

R303 82

C303 0.1 M

C301 0.1 M

R305 12K

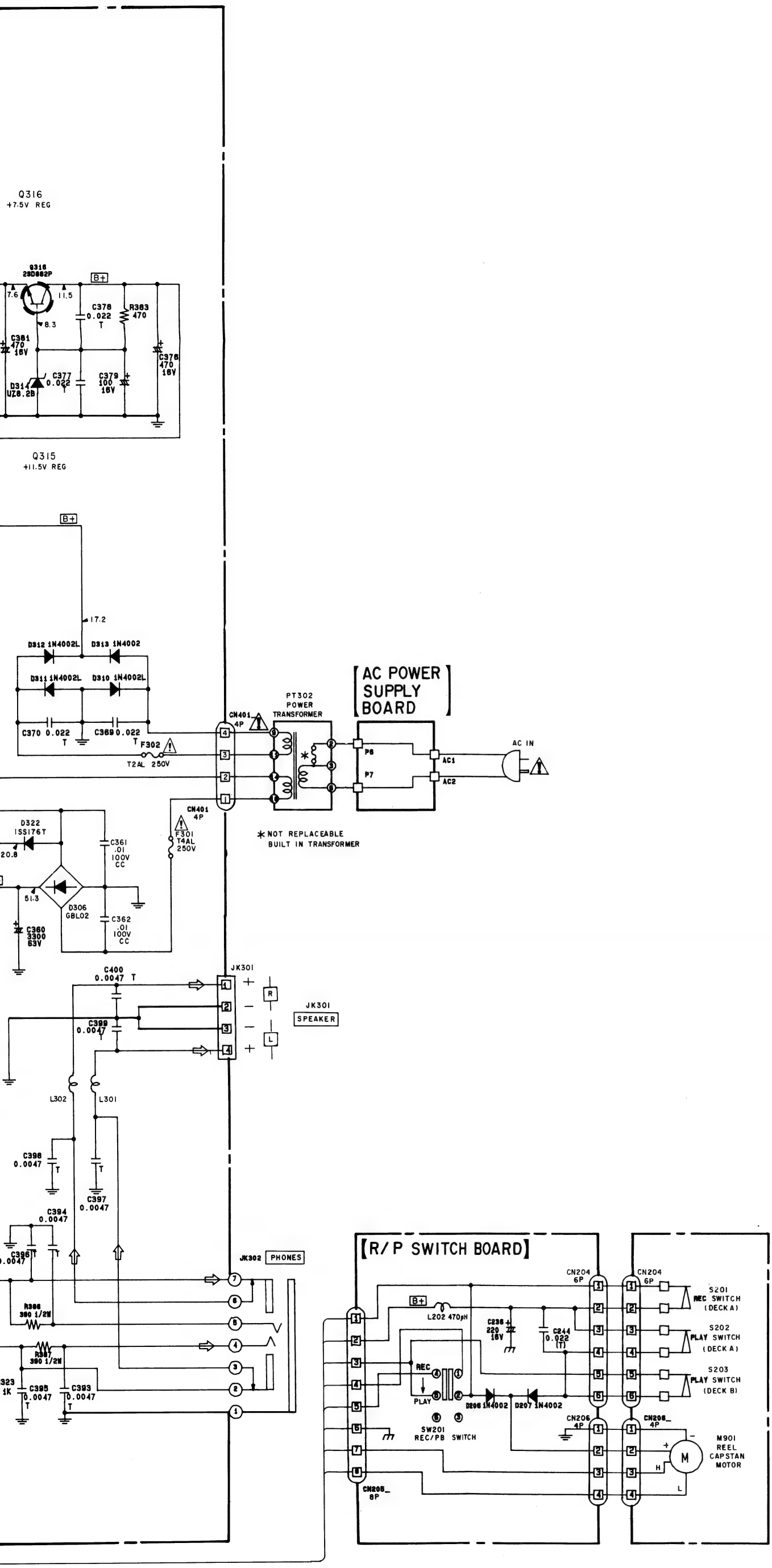
R301 4.7 1/2W

C307 47 25V

C305 1000 50V

GND1

GND3 C413 220P T



Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- : nonflammable resistor.
- [ ] : panel designation.

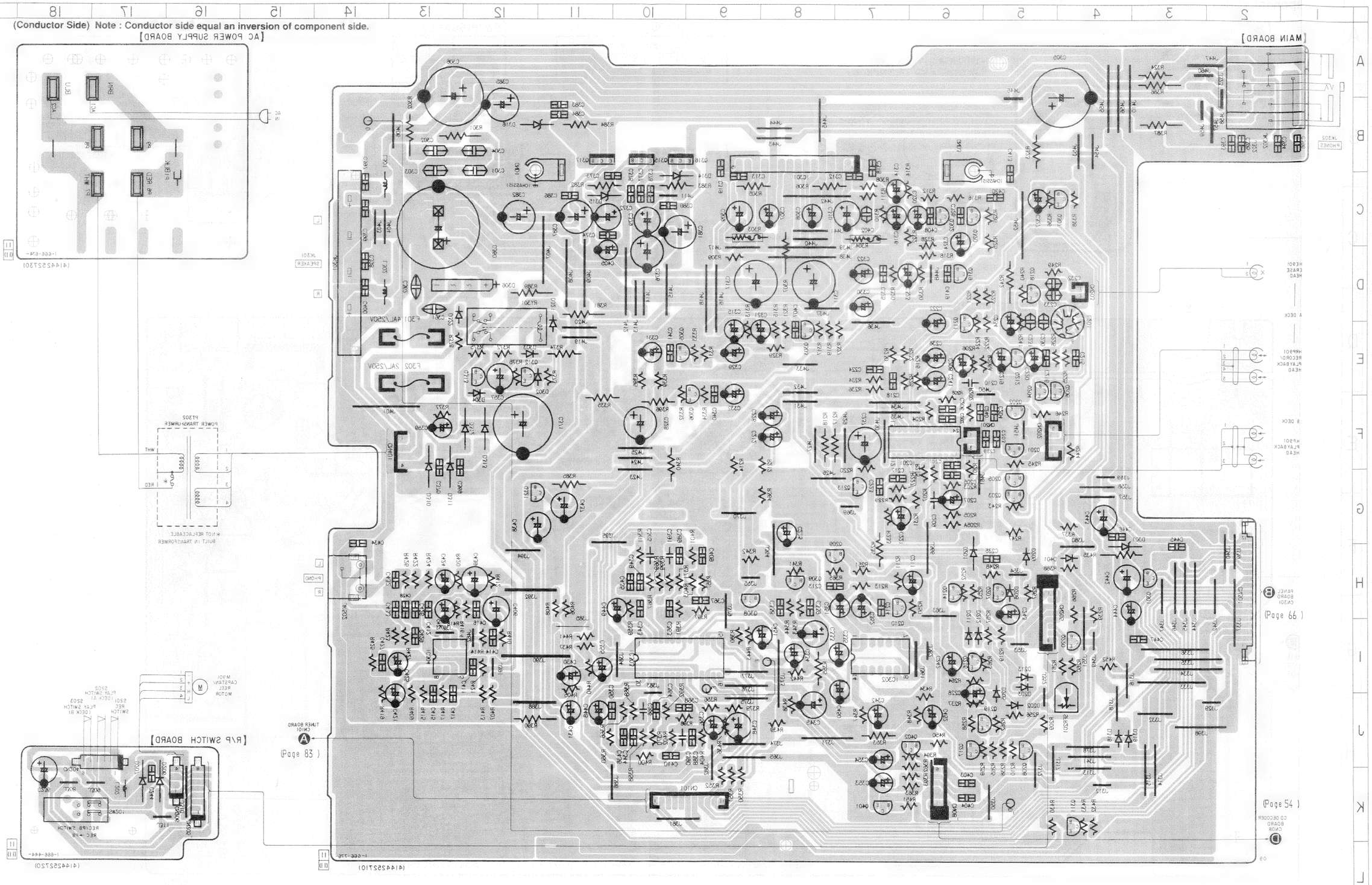
Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

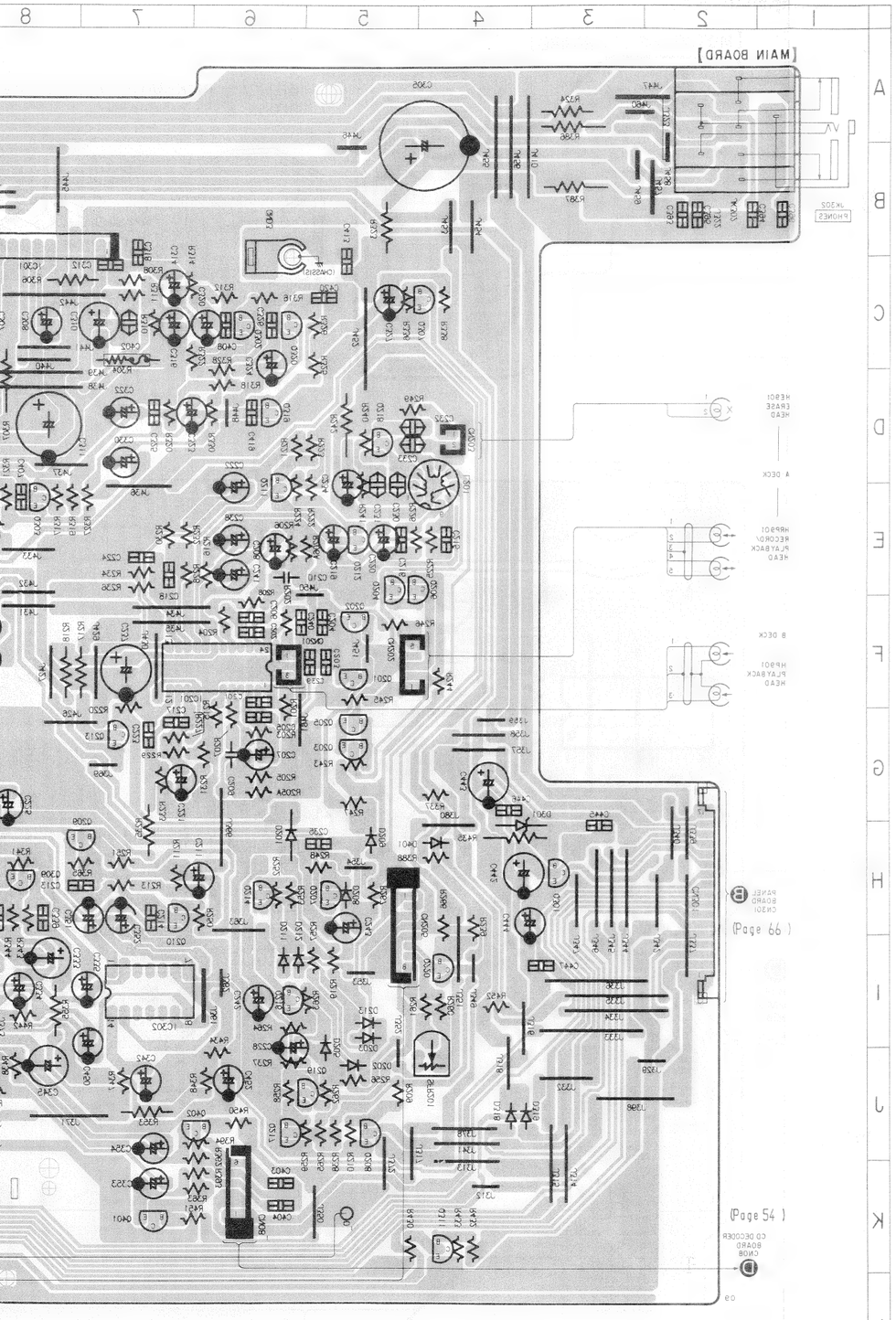
- B+ : B+ Line
- B- : B- Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  < > : PB
  (( )) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK A)
  : CD
  : PHONO

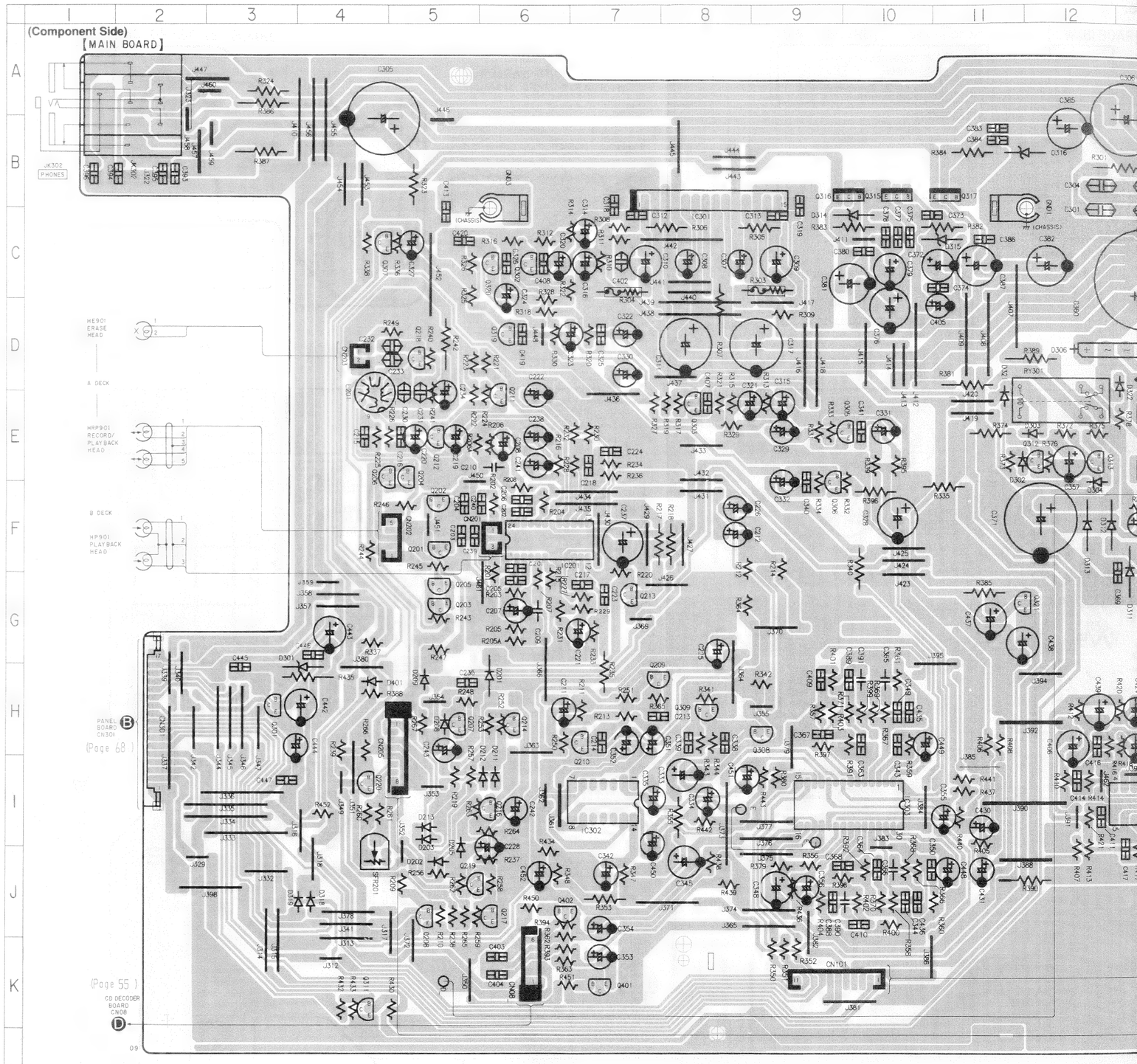
5-7. PRINTED WIRING BOARD — MAIN SECTION — (AEP, UK models)

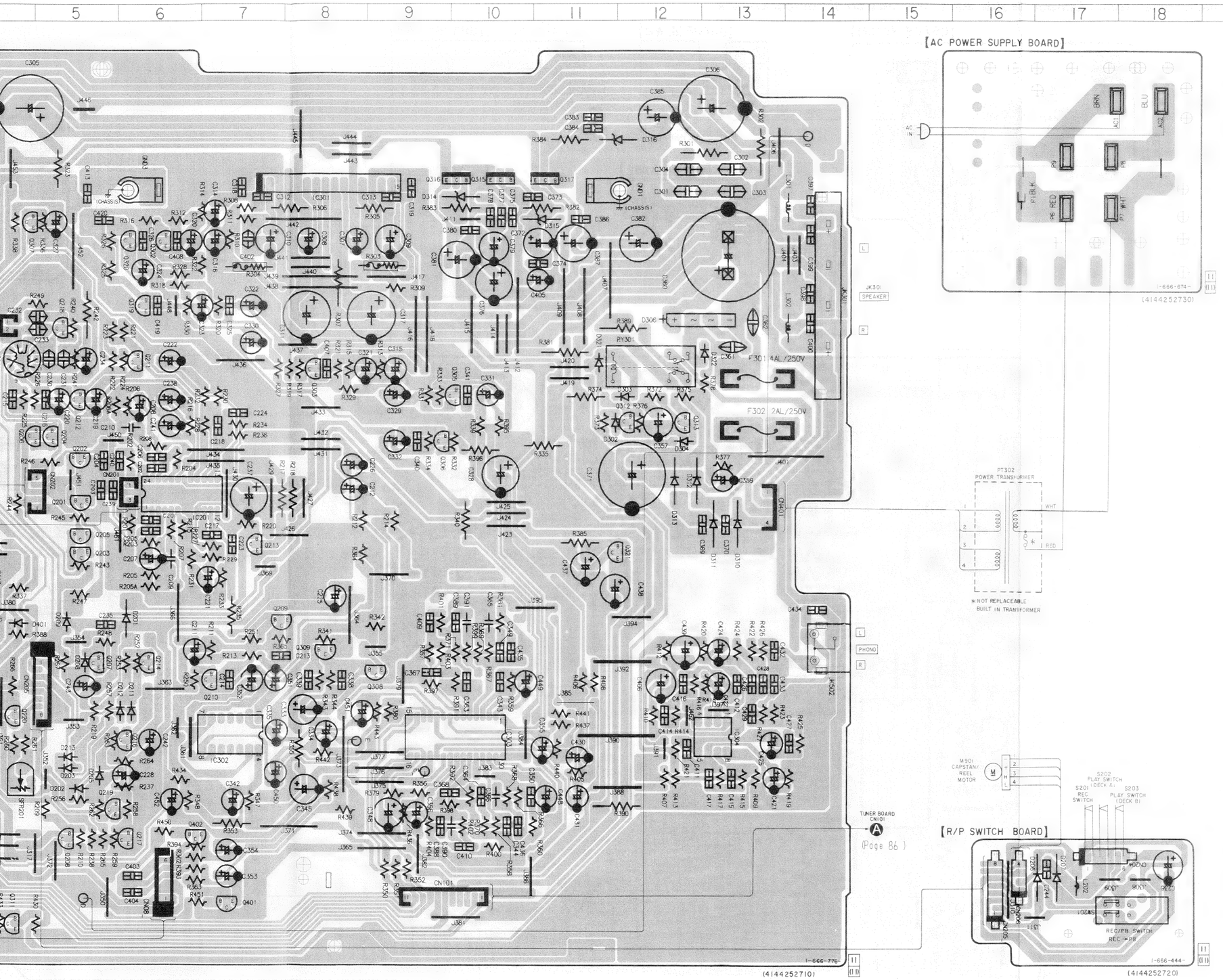
• See page 14 for Circuit Boards Location.

(Conductor Side) Note : Conductor side equal an inversion of component side.




[MAIN BOARD]
HE901 ERASE HEAD
A DECK
HRP901 RECORD/ PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
PANEL BOARD CN301
(Page 66)
(Page 54)
CD DECODER BOARD CN08


(Component Side)
[MAIN BOARD]
JK302 PHONES
HE901 ERASE HEAD
A DECK
HRP901 RECORD/ PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
PANEL BOARD CN301
(Page 68)
(Page 55)
CD DECODER BOARD CN08



• Semiconductor Location

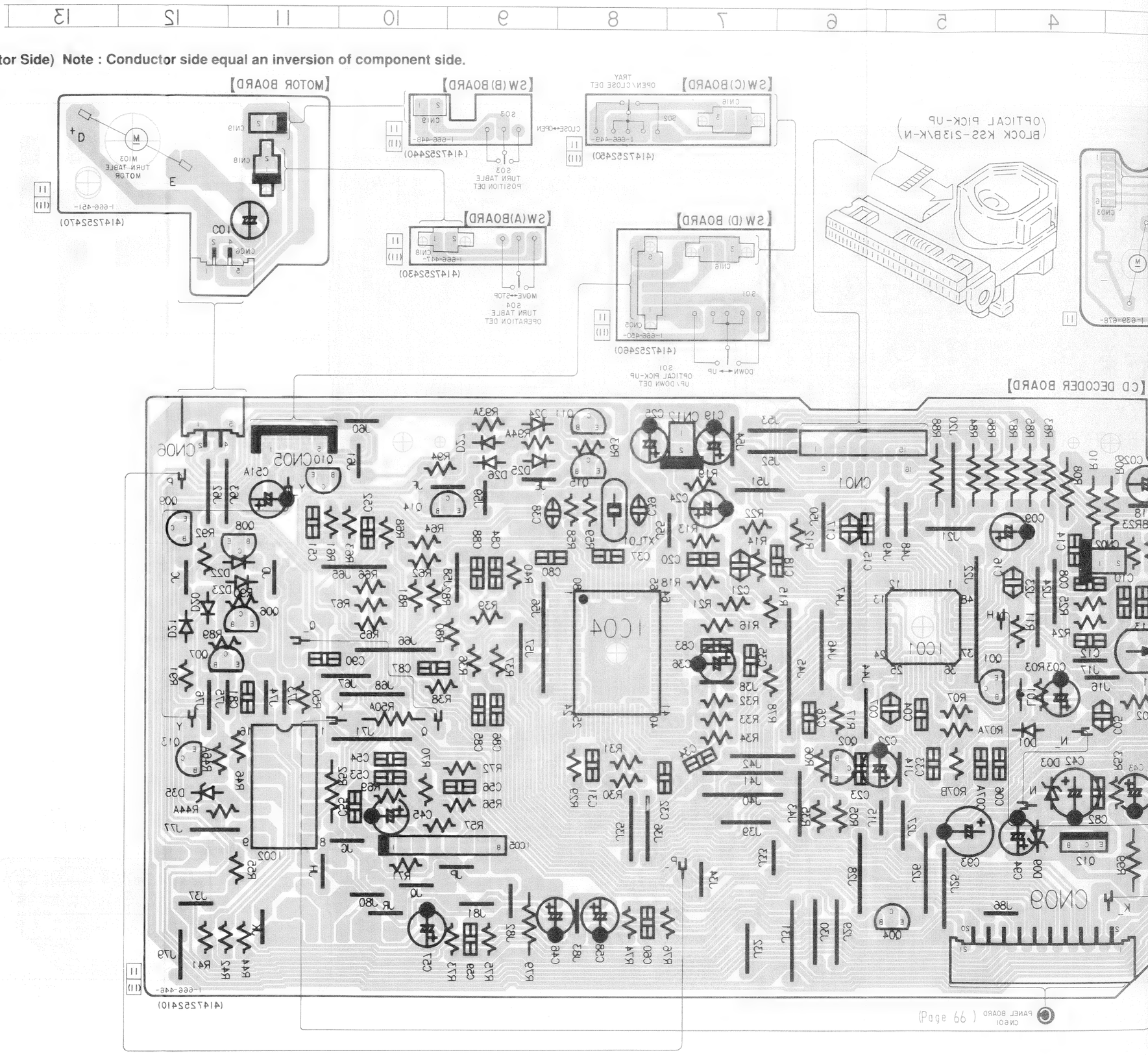
Ref. No.	Location	Ref. No.	Location
D201	H-6	Q202	F-5
D202	J-5	Q203	G-5
D203	I-5	Q204	E-5
D205	I-5	Q205	G-5
D206	K-17	Q206	E-4
D207	K-17	Q207	H-5
D208	H-5	Q208	J-5
D209	H-5	Q209	G-7
D211	H-6	Q210	H-7
D212	H-6	Q211	E-6
D213	I-5	Q212	E-5
D301	G-3	Q213	G-7
D302	E-11	Q214	H-6
D303	E-12	Q216	I-6
D304	F-12	Q217	J-6
D306	D-12	Q218	D-5
D310	G-13	Q219	J-5
D311	G-13	Q220	I-4
D312	F-12	Q301	H-3
D313	F-12	Q302	C-6
D314	C-9	Q303	E-8
D315	C-11	Q305	E-10
D316	B-12	Q306	F-9
D318	J-4	Q307	C-4
D319	J-3	Q308	H-9
D321	D-11	Q309	H-8
D322	D-13	Q311	K-4
D401	H-5	Q312	E-12
		Q313	E-12
IC201	F-6	Q315	B-10
IC301	C-8	Q316	B-9
IC302	I-7	Q317	B-11
IC303	I-10	Q319	D-6
IC304	I-13	Q320	C-6
		Q321	G-12
Q201	F-5	Q401	K-7
		Q402	J-6

Note:
• ⟜ : parts extracted from the component side.

5-8. PRINTED WIRING BOARD — CD SECTION —

• See page 14 for Circuit Boards Location.

(Conductor Side) **Note : Conductor side equal an inversion of component side.**



• **Semiconductor Location**

Ref. No.	Location
D01	G-4
D03	G-4
D09	H-4
D20	F-12
D21	F-12
D22	E-11
D23	F-11
D24	D-9
D25	D-9
D26	D-9
D27	D-9
D35	G-12
D36	G-3
IC01	F-5
IC02	H-11
IC03	E-2
IC04	F-8
IC05	H-9
Q01	F-4
Q02	G-6
Q04	I-5
Q05	G-3
Q06	F-11
Q07	F-12
Q08	E-11
Q09	E-12
Q10	D-11
Q11	E-8
Q12	H-4
Q13	G-12
Q14	E-10
Q15	E-8

Note:

• o—— : parts extracted from the component side.

ent side.

【SW(B)BOARD】

【SW(C)BOARD】

【SW(A)BOARD】

【SW(D) BOARD】

【MOTOR (6P)(S) BOARD】

(OPTICAL PICK-UP BLOCK KSS-213B/K-N)

【CD DECODER BOARD】

(Component Side)

【MOTOR (6P)(S) BOARD】

(OPTICAL PICK-UP BLOCK KSS-213B/K-N)

【CD DECODER BOARD】

(Page 36,48)

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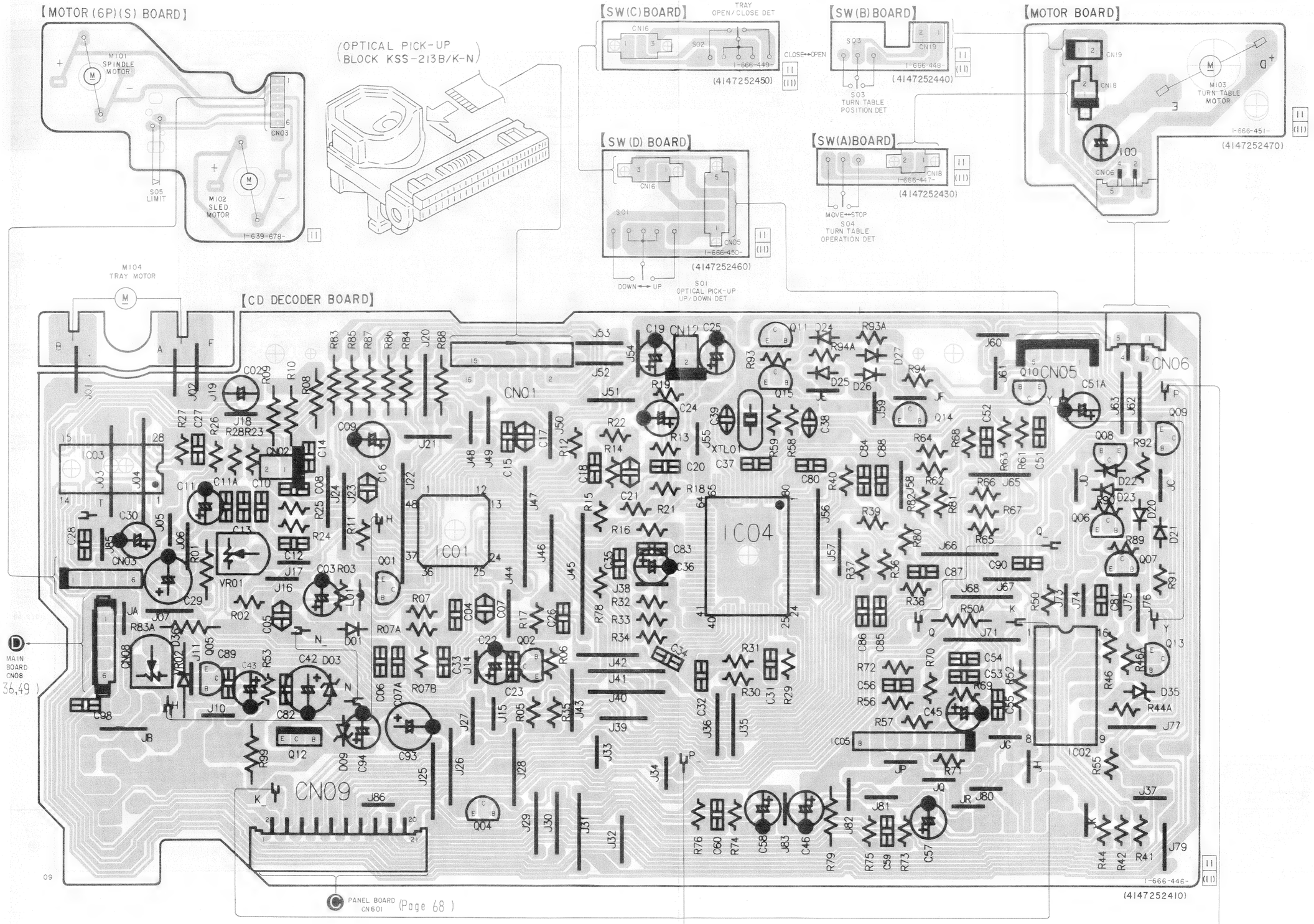
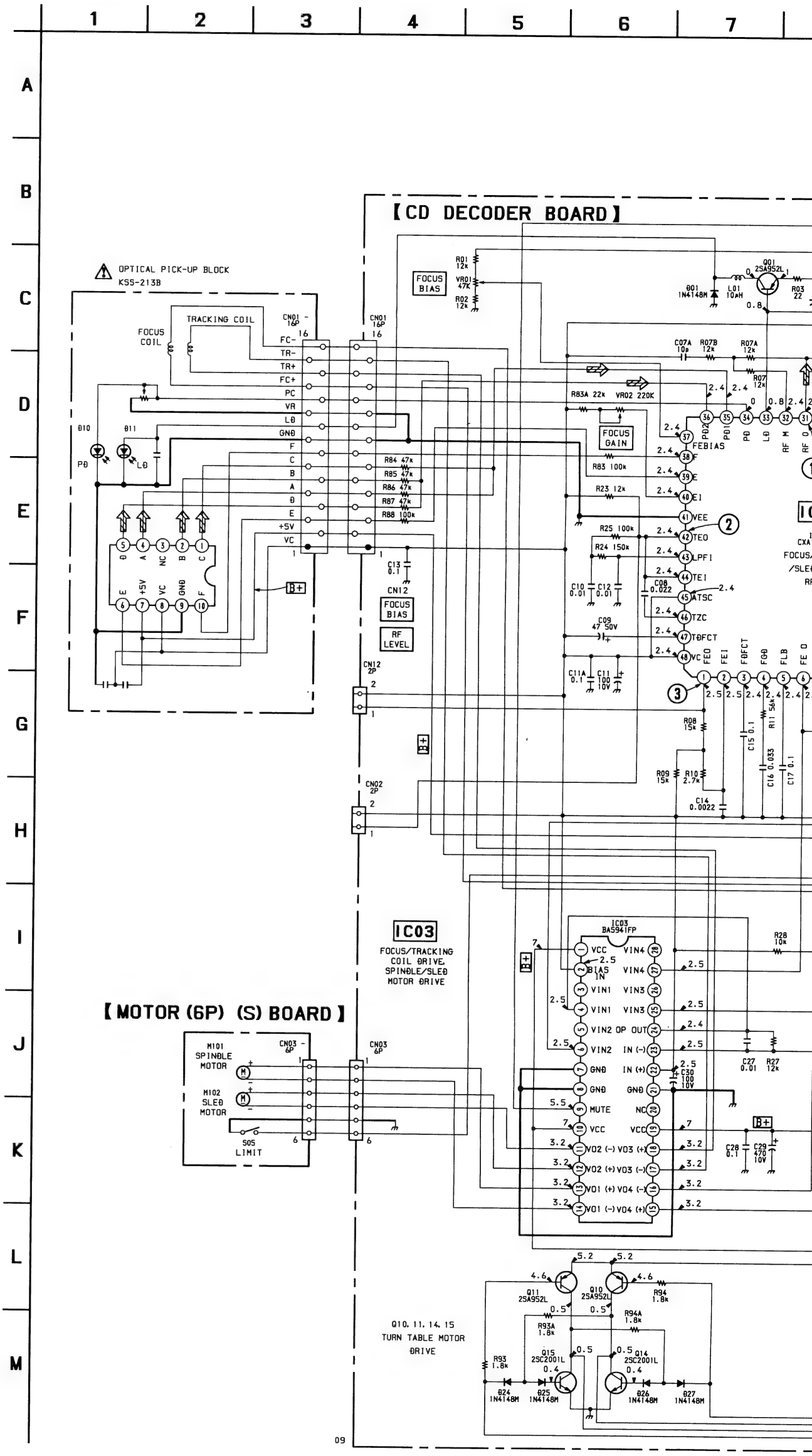
(Component Side)



5-9. SCHEMATIC DIAGRAM — CD SECTION —

• See page 29 for IC Block Diagrams.



• Waveforms

① 1.2Vp-p (PLAY) IC01 ㉛ RF 0	⑥ 5.6Vp-p 4.33MHz IC04 ㊿ XPCK
② APPROX 60mVp-p (PLAY) IC01 ㊷ TEO	⑦ 5.4Vp-p 2.12MHz IC04 ㊼ BCK1
③ APPROX 80mVp-p (PLAY) IC01 ① FEO	⑧ 5Vp-p 44.2kHz IC04 ㊸ LRCK1
④ 2.5Vp-p 124kHz (PLAY) IC04 ㉕ MDP	⑨ 0.5Vp-p 33.9MHz IC04 ㉝ XTA1
⑤ 5.1Vp-p 7.373kHz IC04 ㊷ RFCK	

Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

【SW (D) BOARD】

S01
OPTICAL PICK-UP
UP/DOWN DET

DOWN
UP

CN16 - 3P

CN05 - 5P

【SW (C) BOARD】

S02
TRAY
OPEN/CLOSE
DET

CN16 3P

OPEN
CLOSE

【SW (A) BOARD】

S04
TURN TABLE
OPERATION
DET

STOP ← MOVE

CN18 2P

【MOTOR BOARD】

M103
TURN TABLE
MOTOR

C01 4.7 16V

CN19 - 2P

CN18 - 2P

CN06 - 5P

M104
TRAY MOTOR

CN05 5P

CN06 5P

C02 4.7 16V

Q04, 05
+5V REG

Q01, 02
LD DRIVE

Q06-09
TRAY MOTOR
DRIVER

Q13
TURN TABLE MOTOR
DRIVER

D35 MTZJ-4.3B

D03 MTZJ-5.6B

IC01
CXA1782BQ
FOCUS/TRACKING
/SLED SERVO,
RF AMP

IC02
TRAY/TURN TABLE
MOTOR DRIVER,
REG CONTROL

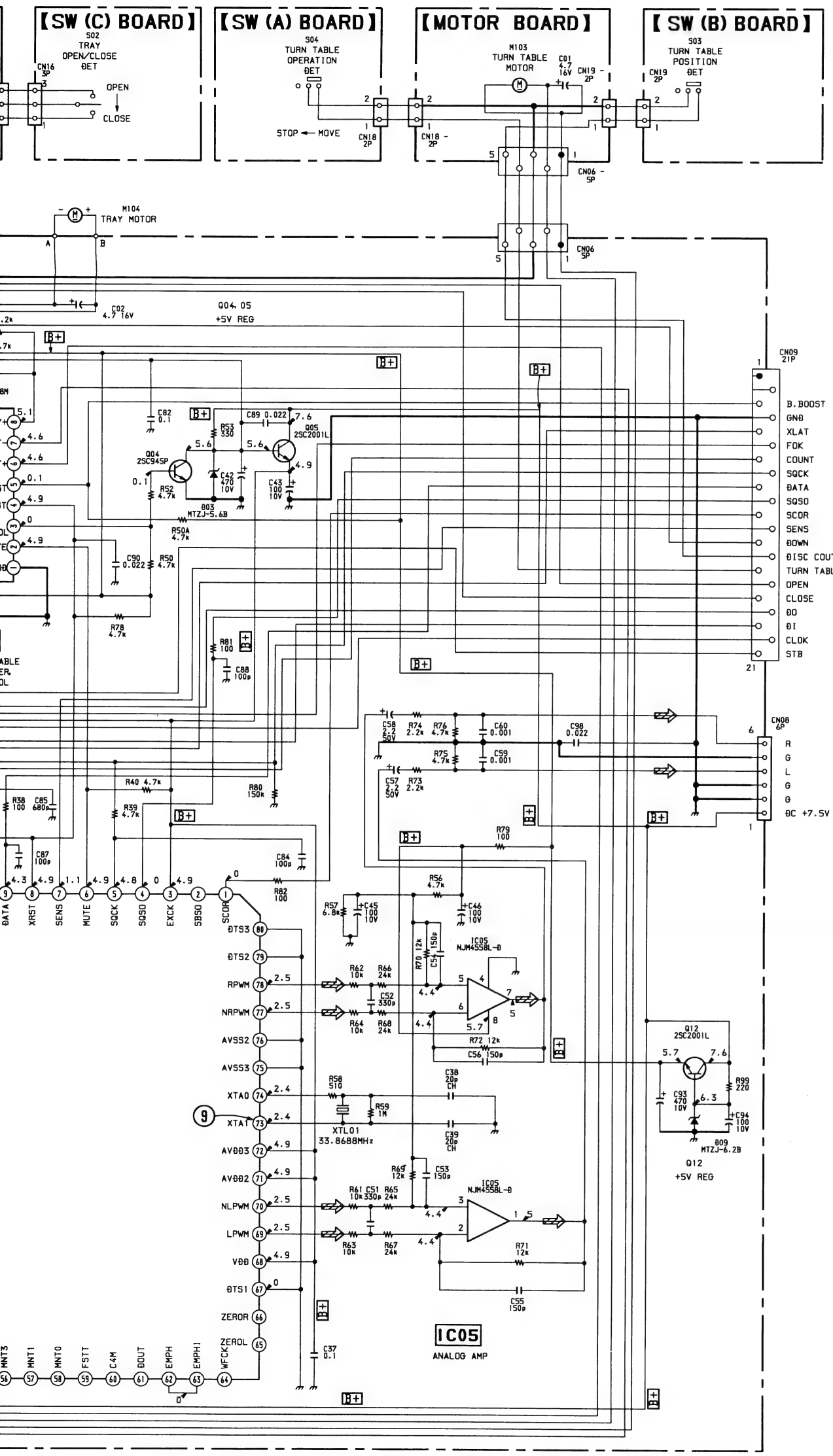
IC04
CX02508Q
DIGITAL SIGNAL PROCESSOR,
D/A CONVERTER,
DIGITAL FILTER

IC05
NJM4558L-D
ANALOG AMP

XTL01
33.8688MHz

D36 1N4002L

B+


【SW (C) BOARD】
S02
TRAY
OPEN/CLOSE
DET
CN16
3P
OPEN
CLOSE
【SW (A) BOARD】
S04
TURN TABLE
OPERATION
DET
STOP ← MOVE
CN18
2P
【MOTOR BOARD】
M103
TURN TABLE
MOTOR
C01
4.7
16V
CN19 -
2P
CN18 -
2P
CN06 -
5P
【SW (B) BOARD】
S03
TURN TABLE
POSITION
DET
CN19
2P
M104
TRAY MOTOR
CN06
5P
C02
4.7 16V
Q04, 05
+5V REG
CN09
21P
B.BOOST
GND
XLAT
FOK
COUNT
SQCK
DATA
SQSO
SCOR
SENS
DOWN
DISC COUT
TURN TABLE
OPEN
CLOSE
DO
DI
CLOK
STB
(Page 64)
C
PANEL
BOARD
CN601
CN08
6P
R
G
L
G
G
DC +7.5V
(Page 40,43)
D
MAIN
BOARD
CN08
Q03
MTZJ-5.6B
Q04
2SC945P
Q05
2SC2001L
Q12
2SC2001L
Q09
MTZJ-6.2B
Q12
+5V REG
IC05
NJM4558L-D
IC05
NJM4558L-B
XTL01
33.8688MHz
IC05
ANALOG AMP
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
SBSO
SCOR
DTS3
DTS2
RPWM
NRPWM
AVSS2
AVSS3
XTAO
XTAI
AVDD3
AVDD2
NLPWM
LPWM
VDD
DTS1
ZEROR
ZEROL
WFCK
EMPHI
EMPH
DOUT
C4M
FSTT
MNT0
MNT1
MNT3

5-10. SCHEMATIC DIAGRAM — PANEL SECTION —

• See page 33 for IC Block Diagrams. • See page 87 for IC Pin Functions.

【PANEL BOARD】

Q605 LED DRIVER
Q601 POWER ON DET
Q602 RESET
Q603 MUTE SWITCH
D601 1N4148M
L601 470UH
D602 1N4148
C601 .1 T
C603 1000 6.3V
C604 .022 T
R629 220
LED601 SEL1213C
DBFB
C607 47 10V
Q605 2SC945P
R638 4.7K
R601 47K
Q601 2SC945P
C608 .1 T
D603 1N4148M
R602 1k
C609 2.2 50V
C610 1 50V
R603 1K
Q602 2SC945P
R605 47K
D604 1N4148M
C611 .1 T
R604 47K
C617 13p CC CH
X601 4.19MHZ
C618 13p CC CH
C612 10 25V
C613 .022 T
R624 10K
Q603 2SC945P
R606 1K
R607 15K
R646 4.7K
R642 4.7K
R643 4.7K
R644 4.7K
R645 4.7K
C622 100 10V
C624 .01 T

17 CN301_ 17P
MODE SW (9K/10K)
TUNED
B.BOOST
+5.8V
GND
S.MUTE
SYN.REC IN
TU.MUTE
ST IN
DI
DO
CLK
CE
PWR
+12V/SW
GND
TAPE REC OUT
B MAIN BOARD CN301
(Page 41, 44)

R623 1 R622 1 R621 1
LP603 LP602 LP601

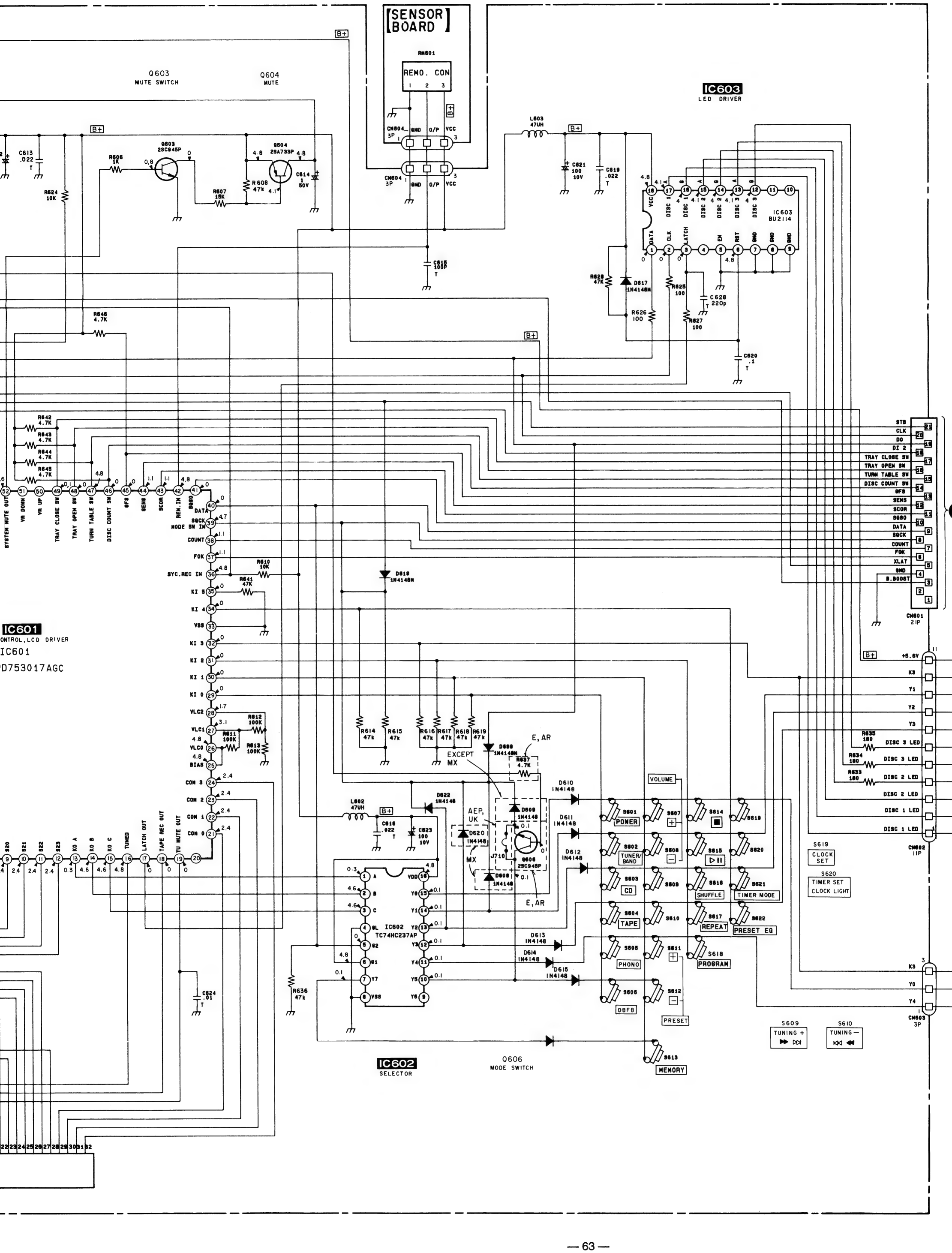
IC601
SYSTEM CONTROL, LCD DRIVER
IC601
UPD753017AGC

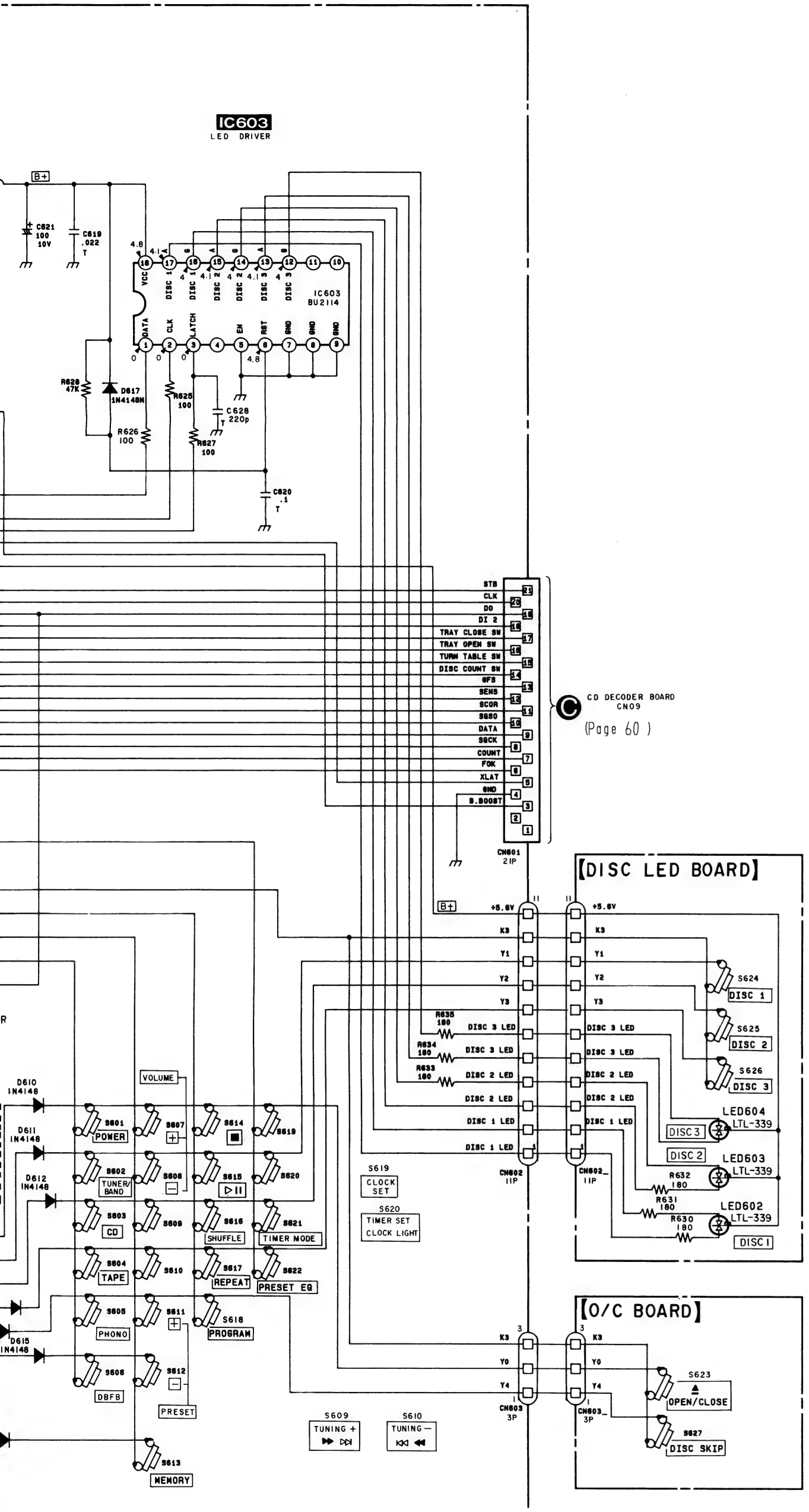
XLAT, X2, X1, VDD, OPEN, POWER DOWN IN, VDD, POWER OUT, SYSTEM MUTE OUT, VR DOWN, VR UP, TRAY CLOSE SW, TRAY OPEN SW, TURN TABLE SW, DISC COUNT SW, SFS, SENS, SCOR, REN.IN, SBSO, DATA, SSCK, MODE SW IN, COUNT, FOK, SYC.REC IN, KI 5, KI 4, VSS, KI 3, KI 2, KI 1, KI 0, VLC2, VLC1, VLC0, BIAS, COM 3, COM 2, COM 1, COM 0
FN ST IN, DI 2, DI 1, DO, CLK, CE, STB, RESET, S00, S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23
KO A, KO B, KO C, TUNED, LATCH OUT, TAPE REC OUT, TU MUTE OUT

R641 47K
R611 100K
R613 100K

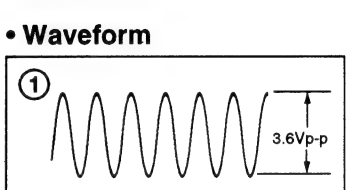
LCD601
LCD DISPLAY

09


SENSOR BOARD
RM601
REMO. CON
1 2 3
CN604 3P
GND O/P VCC
B+
Q603
MUTE SWITCH
Q604
MUTE
Q603 2SC945P
Q604 2SA733P
R606 1K
R607 15K
R608 47K
R624 10K
C613 .022 T
C614 1 50V
C615 100P T
L603 47UH
C621 100 10V
C619 .022 T
IC603
LED DRIVER
IC603 BU2114
VCC DISC 1 DISC 1 DISC 2 DISC 2 DISC 3 DISC 3
DATA CLK LATCH EM RST GND GND GND
R628 47K
D617 1N4148M
R625 100
R626 100
R627 100
C628 220p
C629 .1 T
R646 4.7K
R642 4.7K
R643 4.7K
R644 4.7K
R645 4.7K
SYSTEM MUTE OUT
VR DOWN
VR UP
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
SFS
SENS
SCOR
REM.IN
SGSO
DATA
SCK
MODE SW IN
COUNT
FOK
SYC.REC IN
R610 10K
R641 47K
D619 1N4148M
IC601
CONTROL,LCD DRIVER
IC601
UPD753017AGC
KI 5
KI 4
VSS
KI 3
KI 2
KI 1
KI 0
VLC2
VLC1
VLC0
BIAS
COM 3
COM 2
COM 1
COM 0
R612 100K
R611 100K
R613 100K
S20 S21 S22 S23 KO A KO B KO C TUNED LATCH OUT TAPE REC OUT TU MUTE OUT
R614 47k
R615 47k
R616 47k
R617 47k
R618 47k
R619 47k
D699 1N4148M
E, AR
EXCEPT MX
R637 4.7K
D622 1N4148
L602 47UH
C616 .022 T
C623 100 10V
AEP, UK
D620 IN4148
MX
D608 1N4148
D609 1N4148
J710
Q606 2SC945P
E, AR
D610 IN4148
D611 IN4148
D612 IN4148
D613 IN4148
D614 IN4148
D615 IN4148
IC602 TC74HC237AP
A B C GL G2 G1 Y7 VSS
VDD Y0 Y1 Y2 Y3 Y4 Y5 Y6
R636 47k
C624 .01 T
IC602
SELECTOR
Q606
MODE SWITCH
VOLUME
S601 POWER
S602 TUNER/ BAND
S603 CD
S604 TAPE
S605 PHONO
S606 DBFB
S607
S608
S609
S610
S611
S612
S613 MEMORY
S614
S615
S616 SHUFFLE
S617 REPEAT
S618 PROGRAM
S619
S620
S621 TIMER MODE
S622 PRESET EQ
PRESET
S619 CLOCK SET
S620 TIMER SET CLOCK LIGHT
S609 TUNING +
S610 TUNING —
STB
CLK
DO
DI 2
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
SFS
SENS
SCOR
SGSO
DATA
SCK
COUNT
FOK
XLAT
GND
B.BOOST
CN601 21P
+5.6V
K3
Y1
Y2
Y3
R635 180
R634 180
R633 180
DISC 3 LED
DISC 3 LED
DISC 2 LED
DISC 2 LED
DISC 1 LED
DISC 1 LED
CN602 11P
CN603 3P
Y0
Y4



• **Waveform**



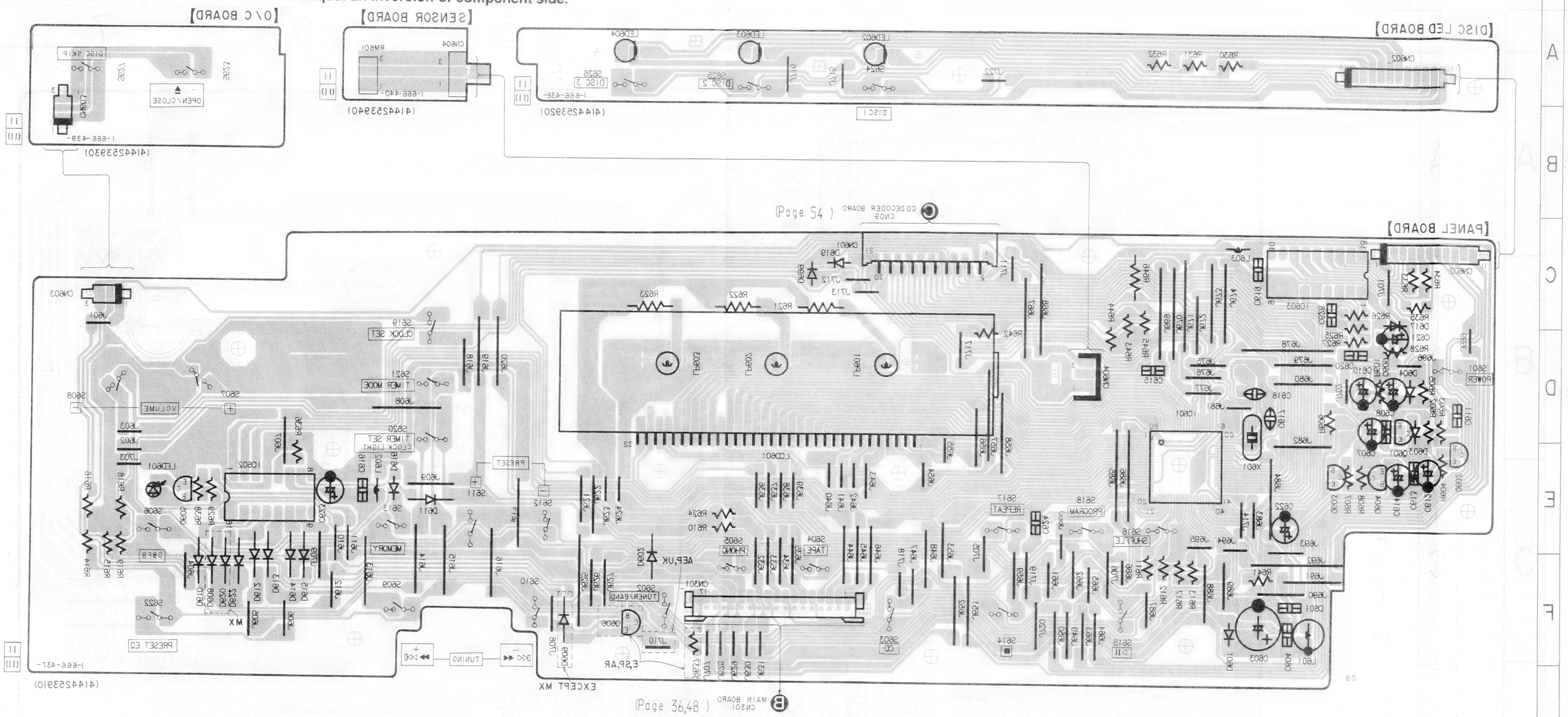
Note:

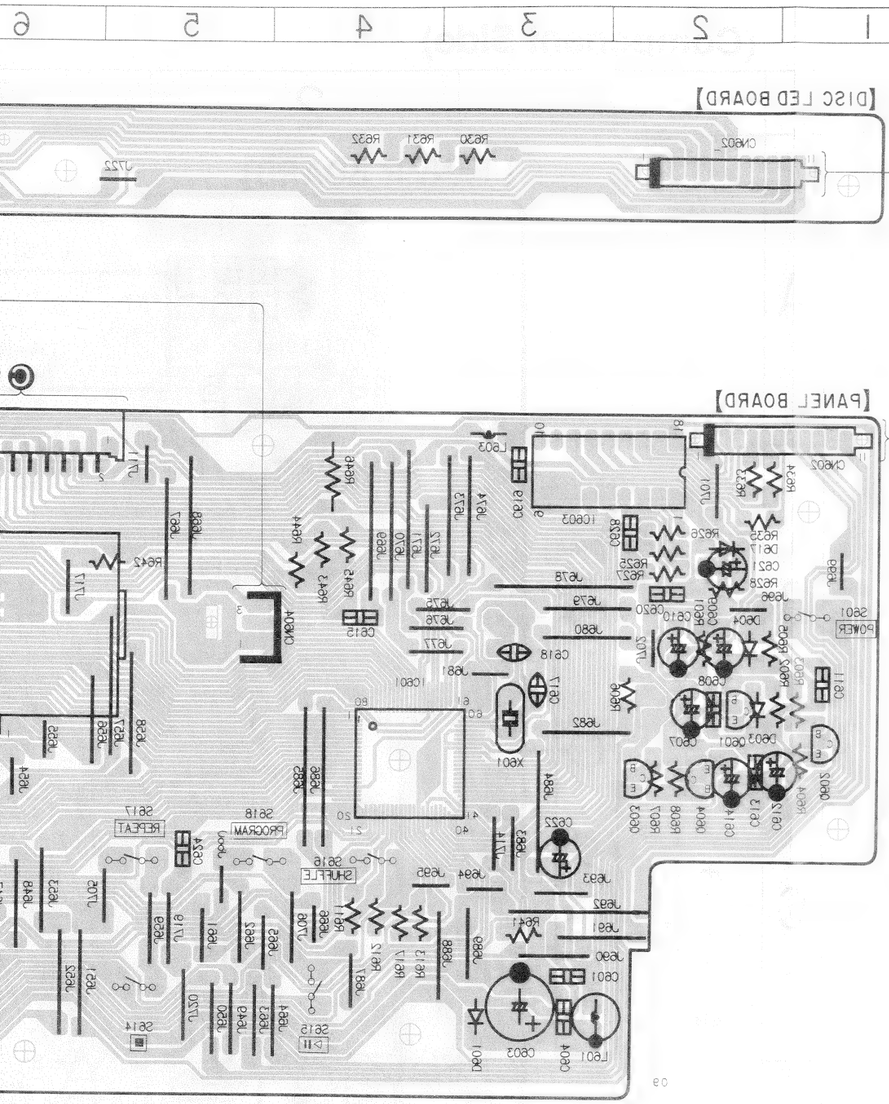
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- △ : internal component.
- [ ] : panel designation.
- [B+] : B+ Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

5-11. PRINTED WIRING BOARD — PANEL SECTION —

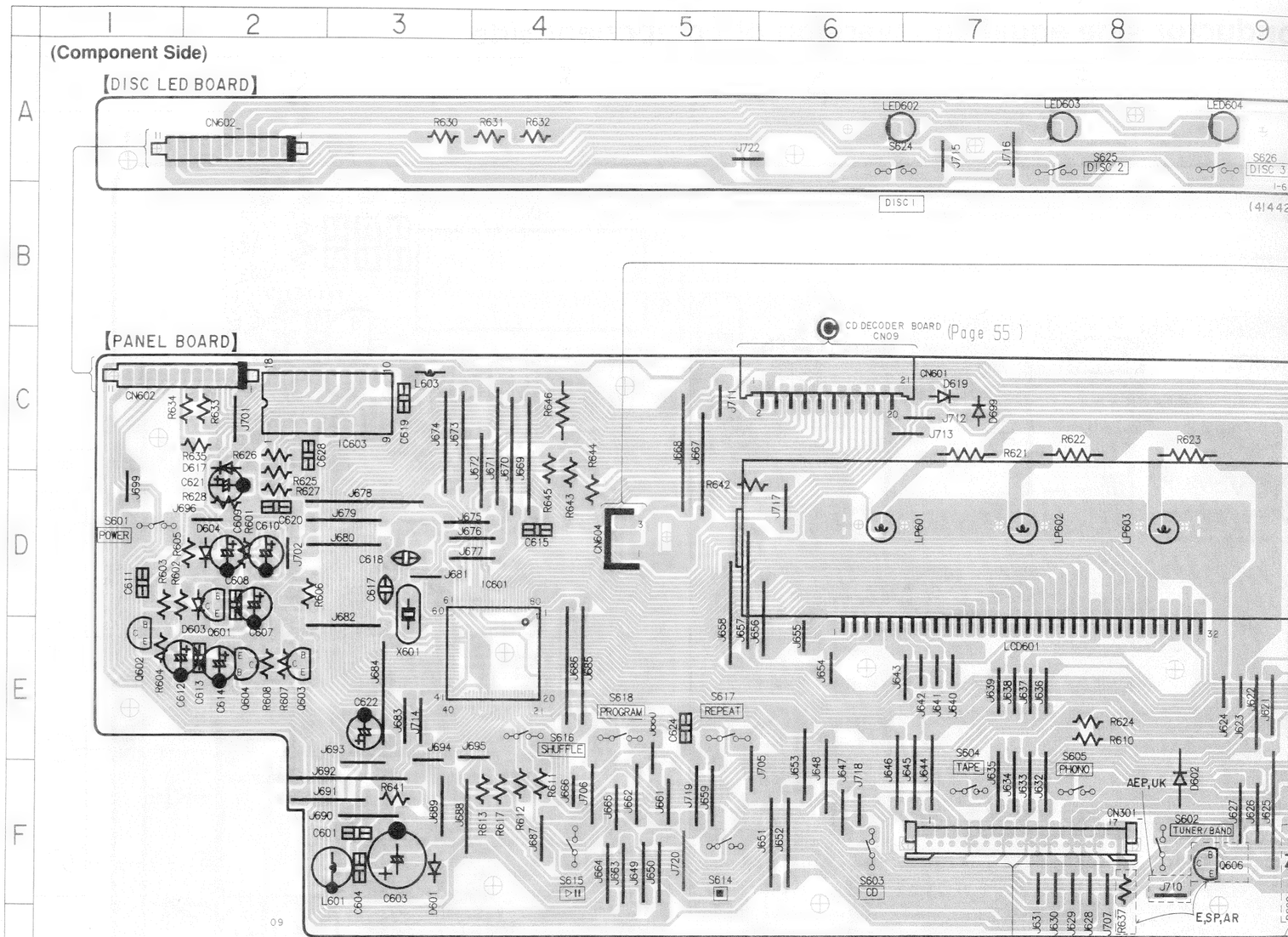
• See page 14 for Circuit Boards Location.

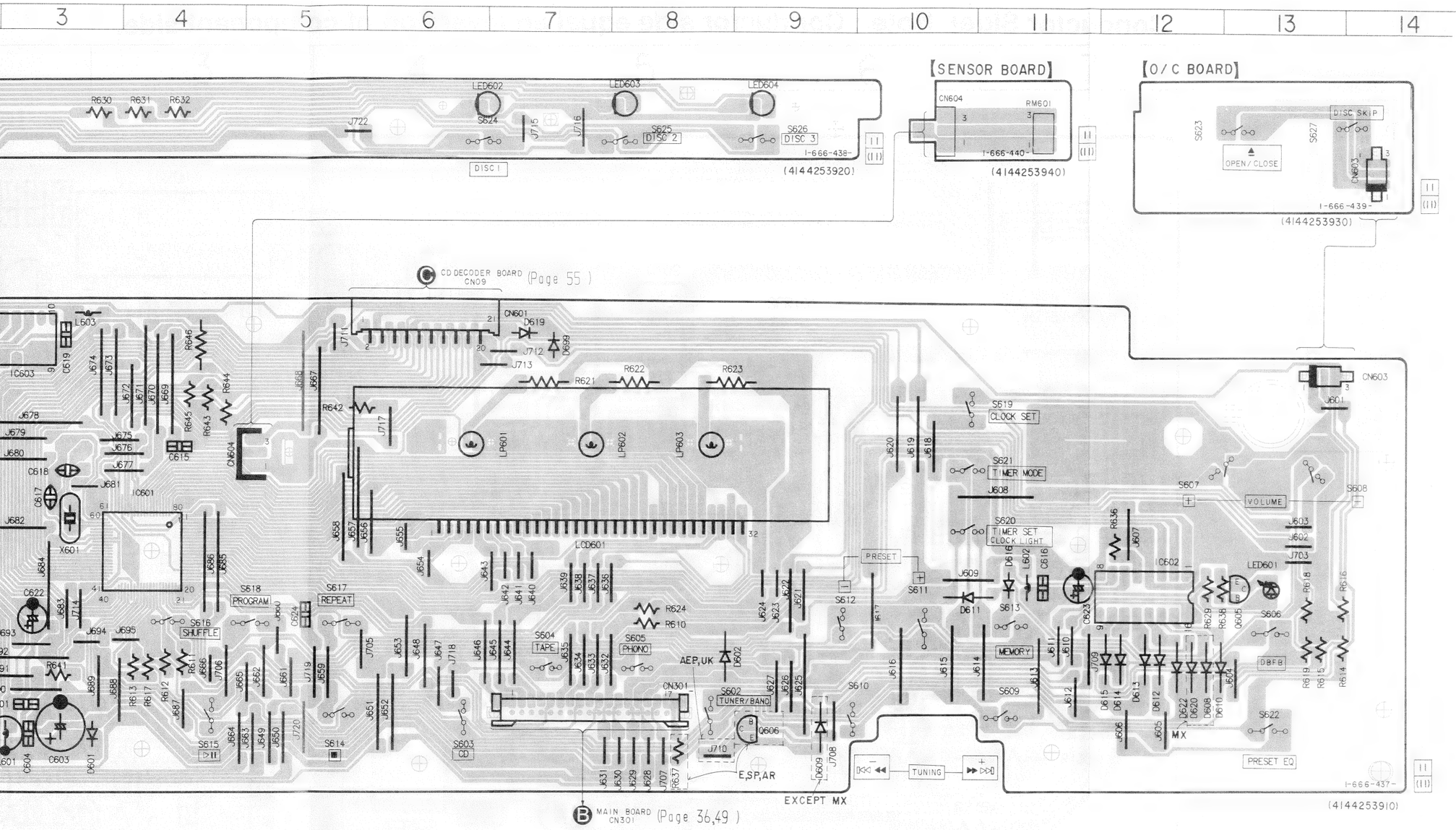
(Conductor Side) Note : Conductor side equal an inversion of component side.





(Component Side)





- **Semiconductor Location**

Ref. No.	Location
D601	F-3
D602	F-9
D603	E-2
D604	D-2
D608	F-12
D610	F-12
D611	E-10
D612	F-12
D613	F-12
D614	F-12
D615	F-12
D616	E-11
D617	C-2
D619	C-7
D622	F-12
D699	C-7
LED601	E-13
LED602	A-6
LED603	A-8
LED604	A-9
IC601	D-4
IC602	E-12
IC603	C-3
Q601	E-2
Q602	E-1
Q603	E-2
Q604	E-2
Q605	E-13
Q606	F-9

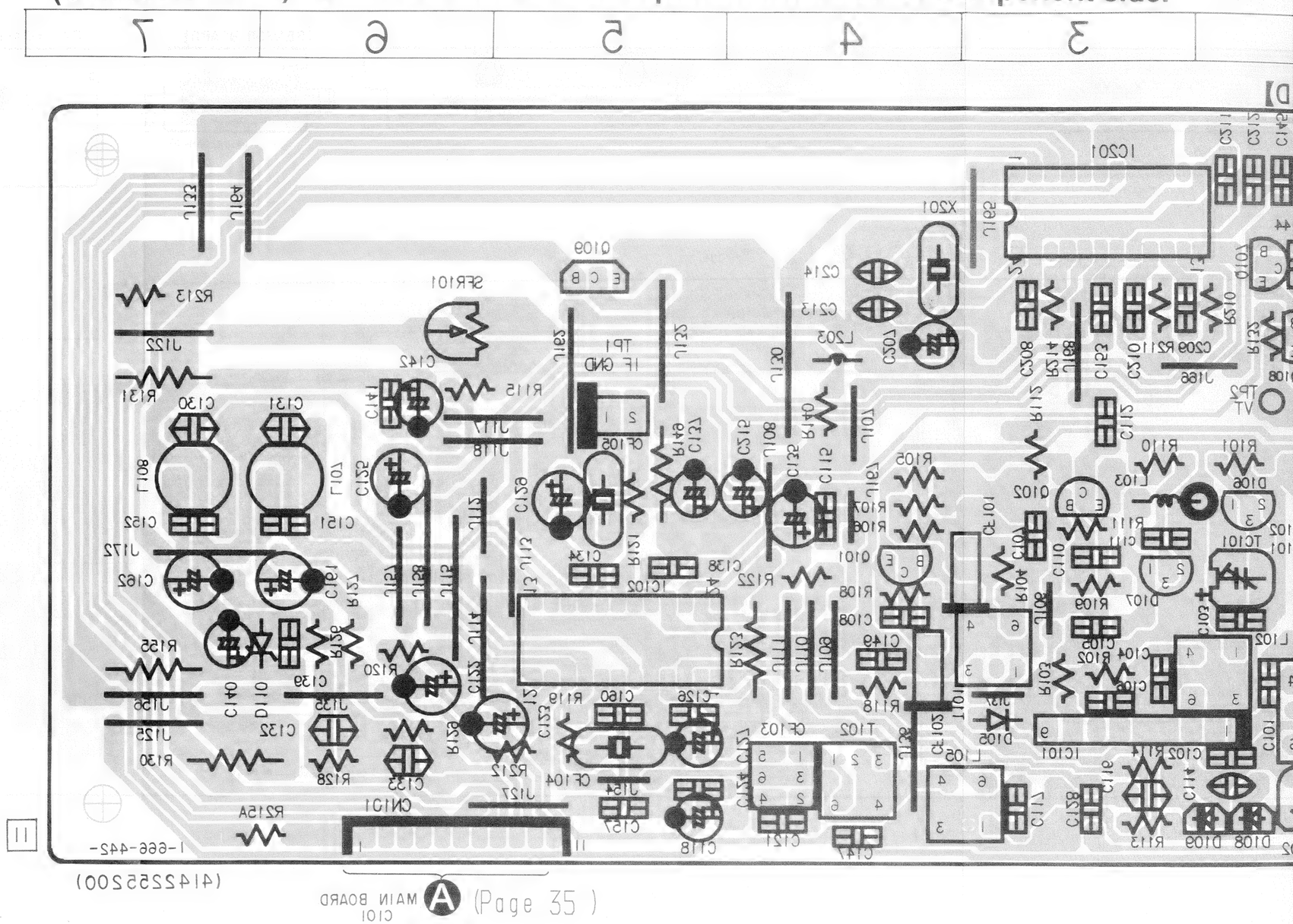
Note:

- ⟜——: parts extracted from the component side.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

5-12. PRINTED WIRING BOARD — TUNER SECTION — (E, AR, MX models)

• See page 14 for Circuit Boards Location.

(Conductor Side) Note : Conductor side equal an inversion of component side.



• **Semiconductor Location**

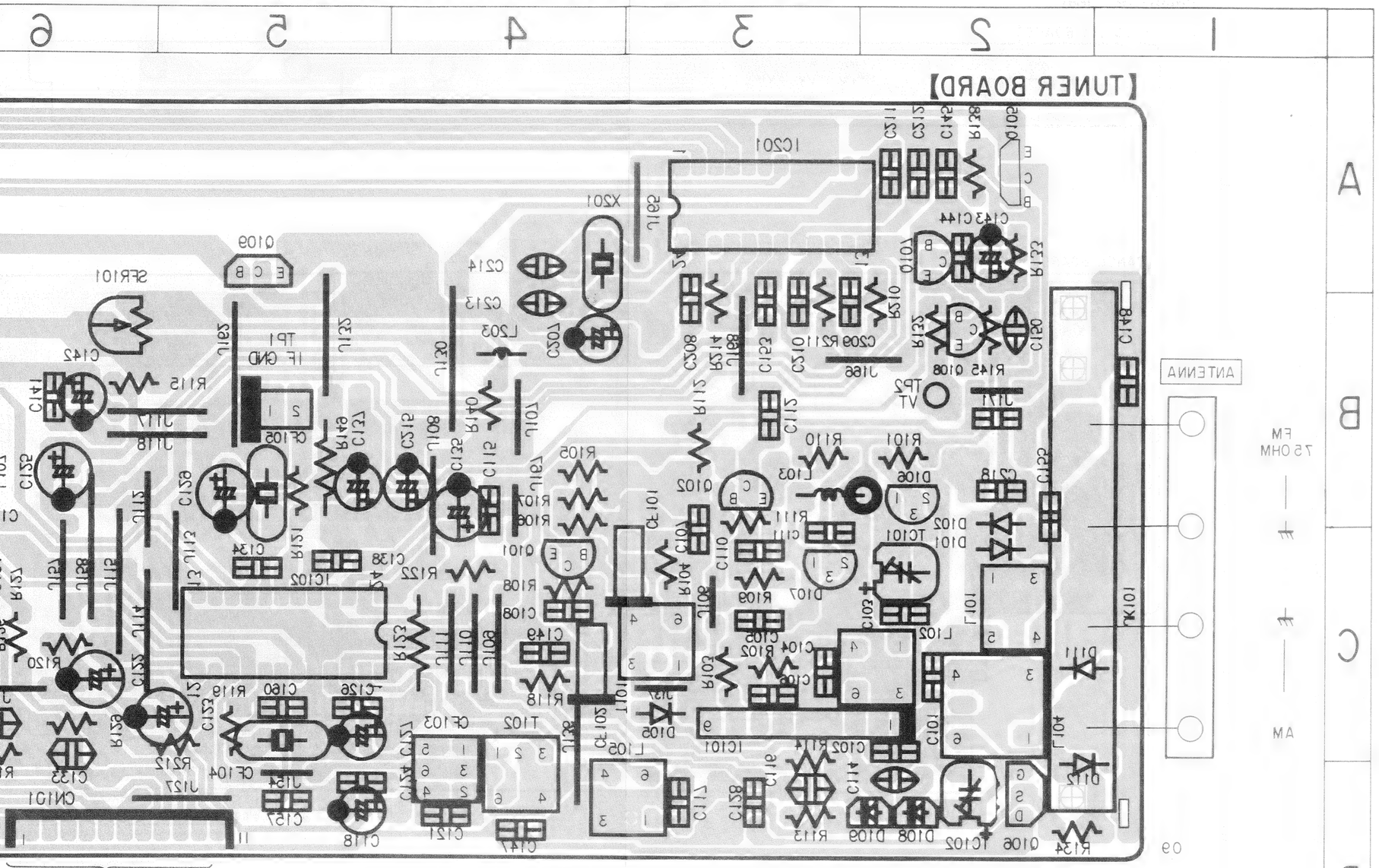
Ref. No.	Location
D101	C-2
D102	B-2
D105	C-3
D106	B-2
D107	C-3
D108	D-2
D109	D-2
D110	C-6
D111	C-2
D112	D-2
IC101	C-3
IC102	C-5
IC201	A-3
Q101	C-4
Q102	B-3
Q105	A-2
Q106	D-2
Q107	A-2
Q108	B-2
Q109	A-5

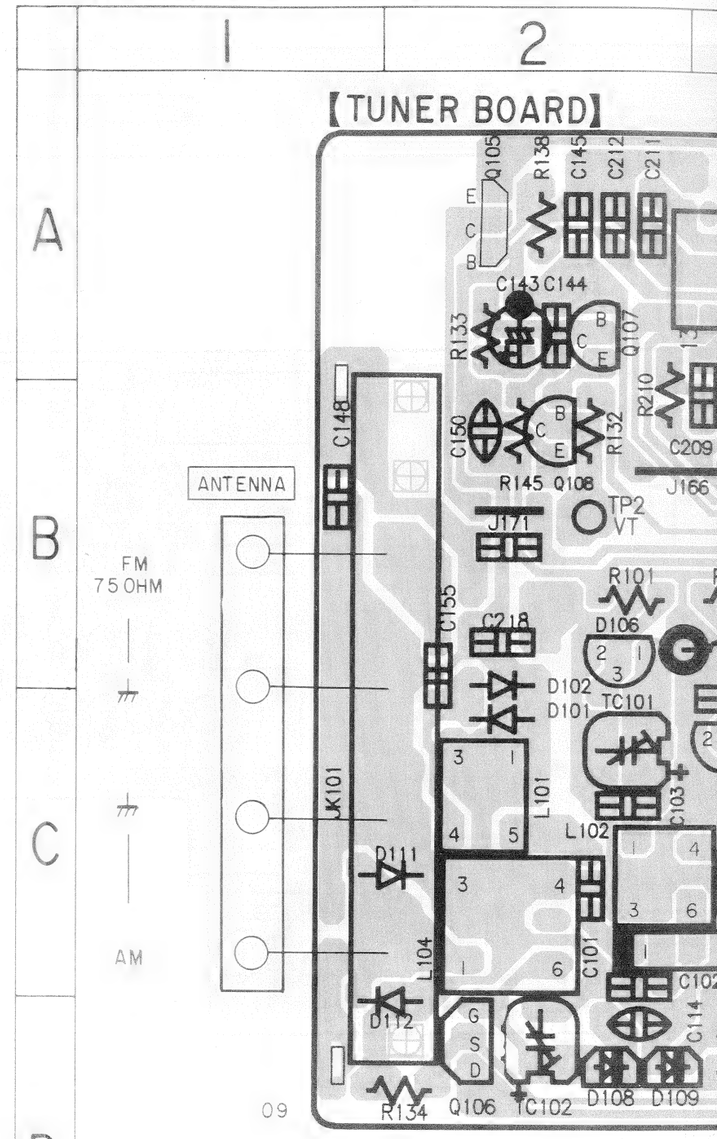
Note:

- ⟜—— : parts extracted from the component side.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

ING BOARD — TUNER SECTION — (E, AR, MX models)
for Circuit Boards Location.

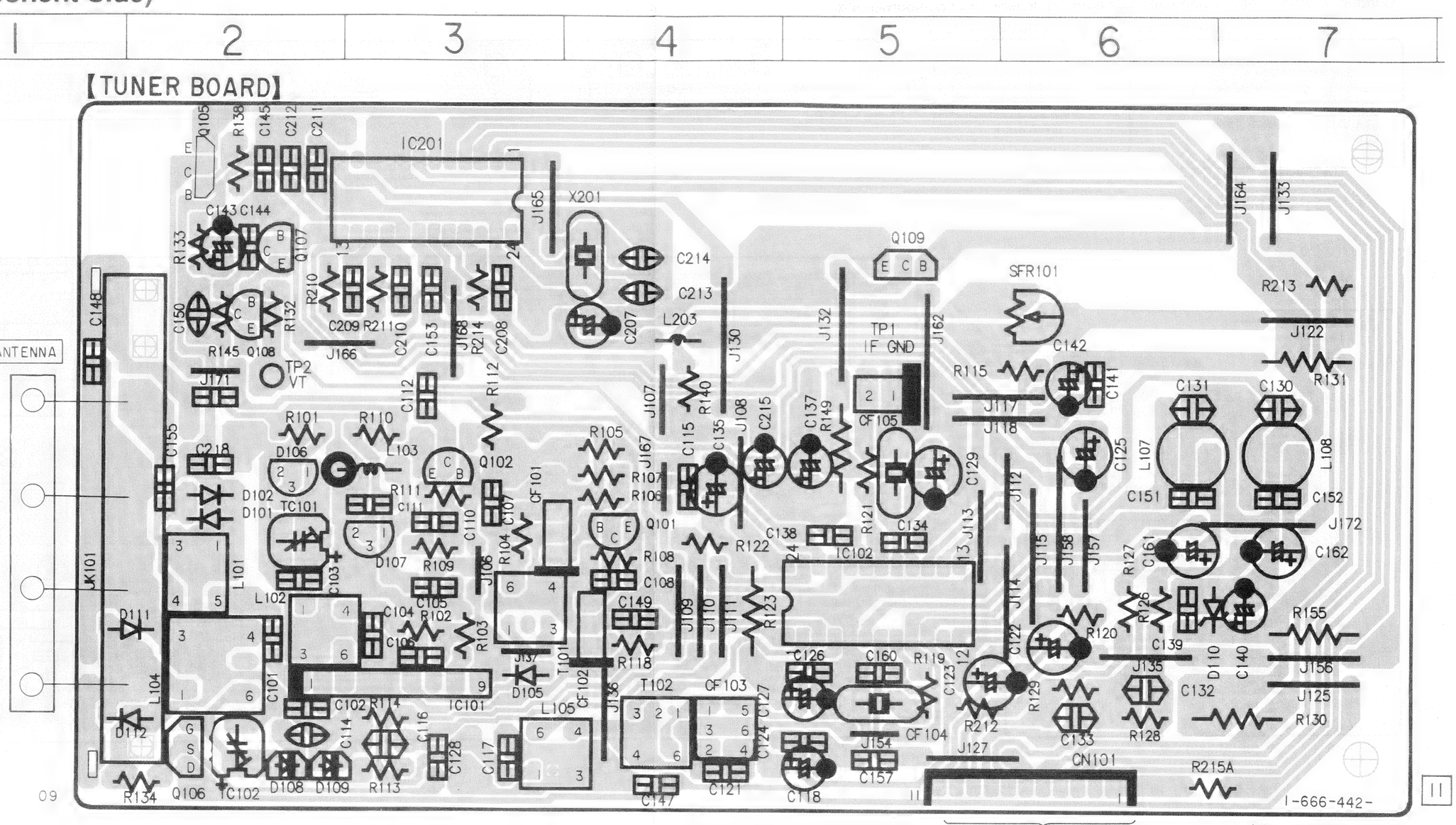
ote : Conductor side equal an inversion of component side.





(Component Side)

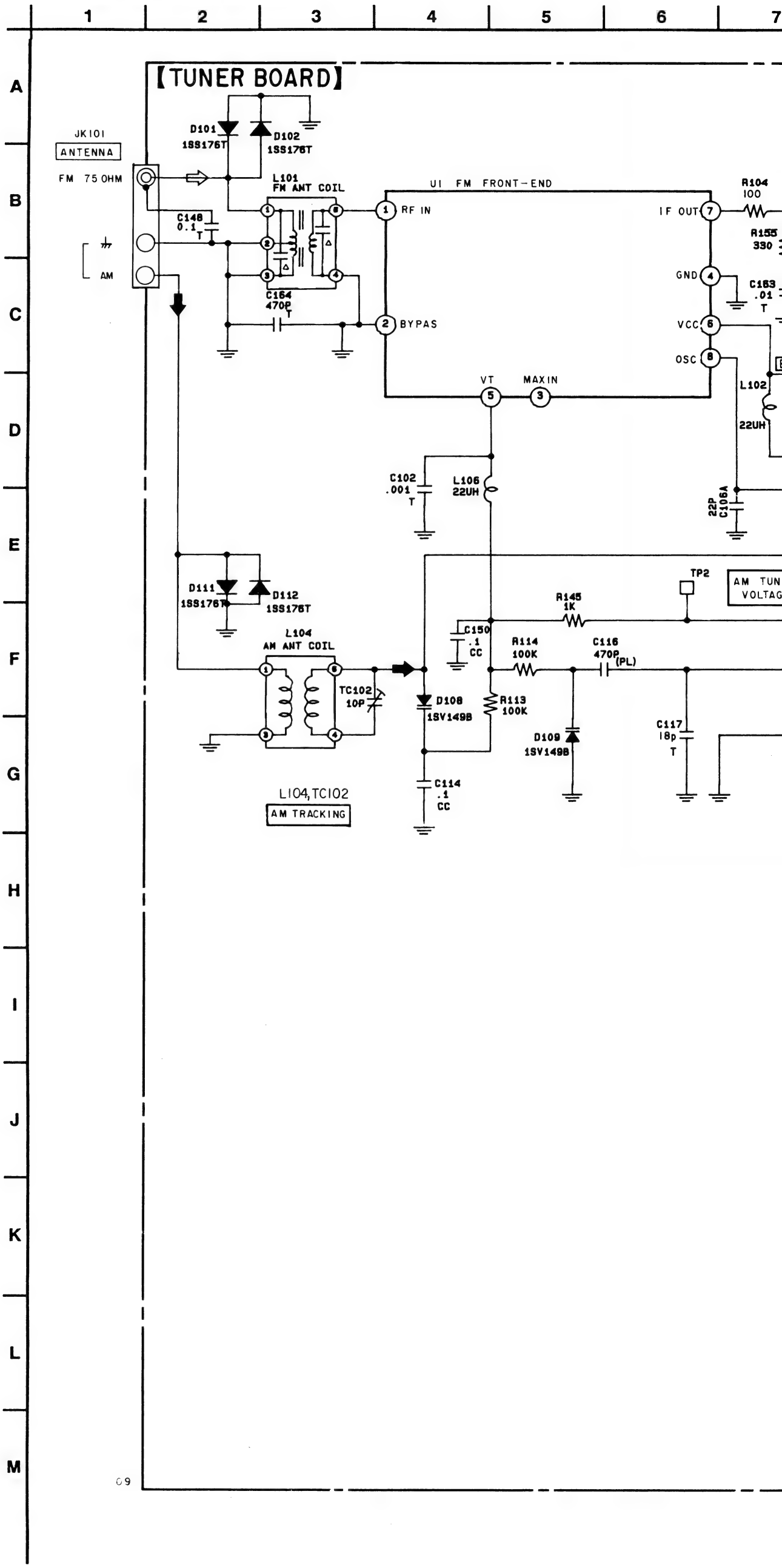
【TUNER BOARD】



(Page 38) A MAIN BOARD C101

5-14. SCHEMATIC DIAGRAM — TUNER SECTION — (AEP, UK models)

- See page 31 for IC Block Diagrams.
- See page 78 for Waveforms.



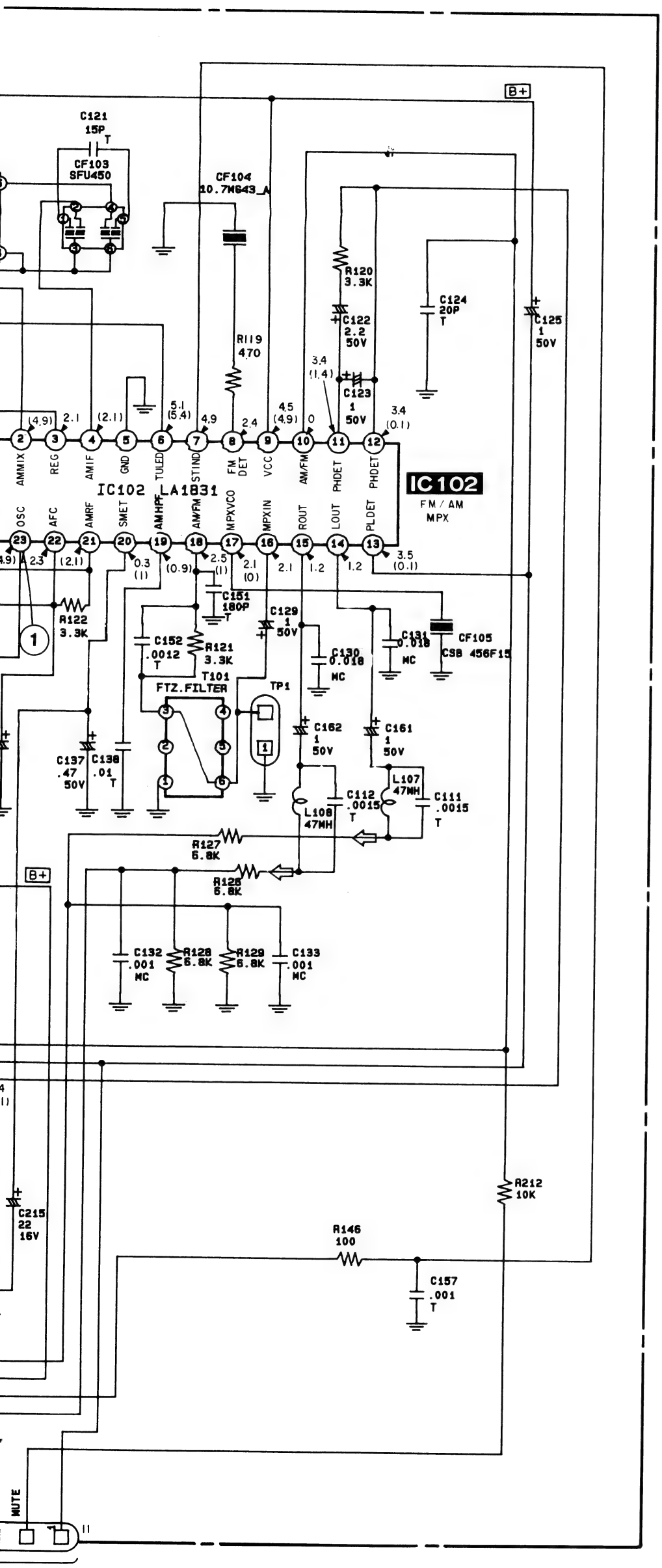
Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- : nonflammable resistor.
- [ ] : panel designation.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- [B+] : B+ Line
- [ ] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM

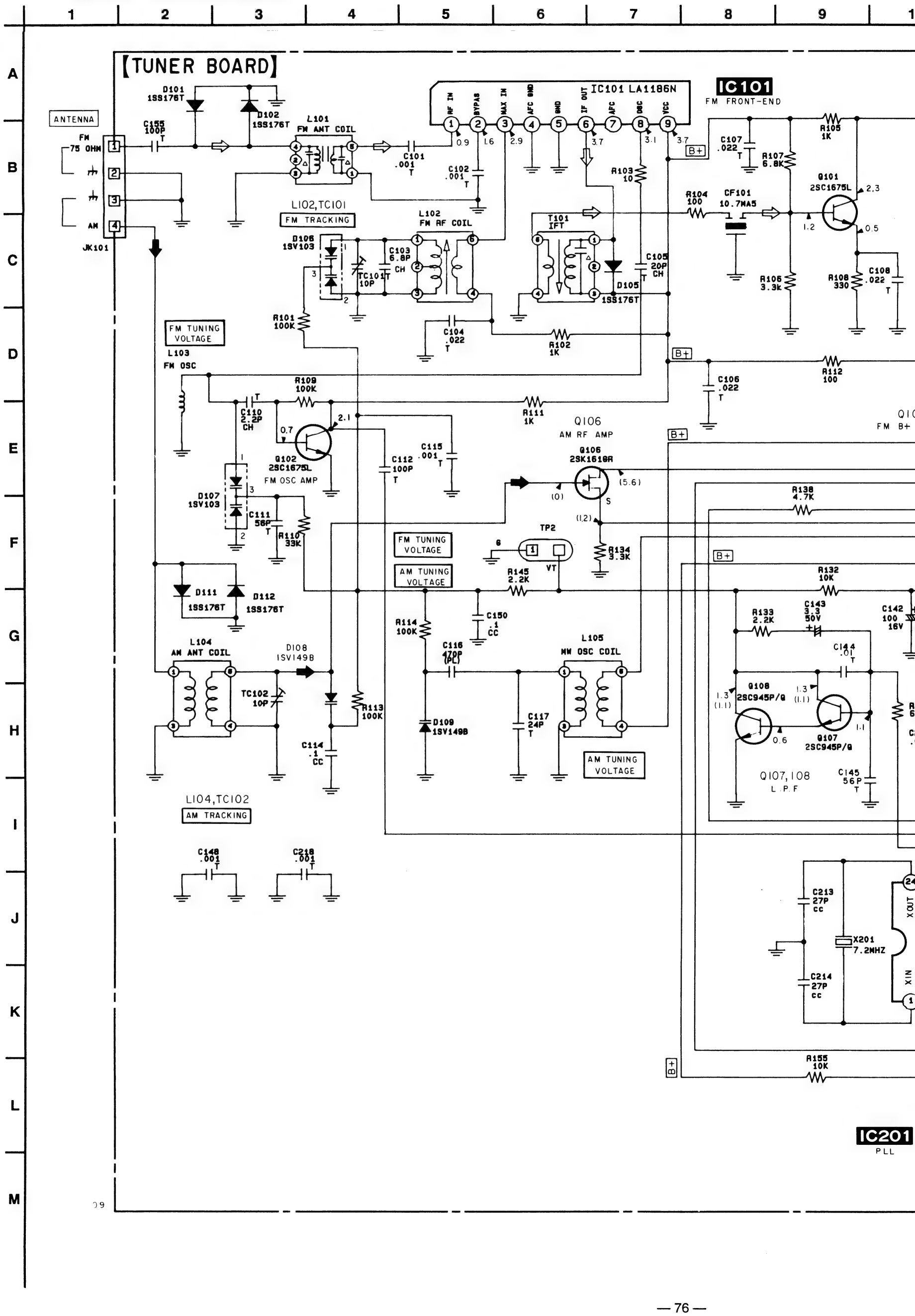
IF OUT 7
GND 4
VCC 6
OSC 8
R104 100
R155 330
C163 .01 T
CF101 10.7MJ
L102 22UH
C106 .022 T
22P C106A
R112 5.6K
C107 .022 T
R107 6.8K
R105 1K
CF102 10.7MJ
Q101 2SC1675L
Q101 FM IF AMP
R141 220
R106 2.2k
C154 .01 T
L103 22UH
R108 330
C108 .022 T
B+
TP2
AM TUNING VOLTAGE
L105 MW OSC COIL
C117 18p T
AM TUNING VOLTAGE
C160 .022 T
C118 100 16V
T102 AM IFT
C121 15P T
CF103 SFU450
CF104 10.7MG43_A
R118 100
R213 10K
R115 22
Q106 2SK1616A
Q106 AM RF AMP
C126 .047 T
C127 10 25V
C149 .022 T
L110 100UH
C128 .022 T
C166 10P T
R123 8.2K
R122 3.3K
R132 10K
R134 3.3K
IC102 LA1831
OSC/FMSD FMIF
AMMIX
REG
AMIF
GND
TUNED
STIND
FM DET
VCC
AM/FM
PHDET
PHDET
OSC
AFC
AMRF
SMET
AMHPF
AM/FM
MPXVCO
MPXIN
ROUT
LOUT
PLDET
R119 4.70
C122 2.2 50V
C123 1 50V
C151 180P T
C152 .0012 T
R121 3.3K
T101 FTZ.FILTER
C129 1 50V
C130 0.018 MC
TP1
C162 1 50V
C112 .0015 T
L108 47MH
R127 6.8K
R125 6.8K
C132 .001 MC
R128 6.8K
R129 6.8K
C133 .001 MC
C135 3.3 50V
C137 .47 50V
C138 .01 T
Q105 FM B+ SWITCH
Q105 DTA114YS
R137 10K
R133 3.3k
C143 .47 50V
C144 .022 T
Q108 2SC945P/Q
Q107 2SC945P/Q
Q107, 108 L.P.F
C145 56P T
R214 6.8K
C208 .01 T
C207 47 16V
C212 100P T
FM TUNED LEVEL
SFR101 10k
R140 1K
D202 1SS176T
C139 .022 T
C140 100 16V
R130 150 1/2W
C142 100 16V
R131 1K
C141 .022 T
L203 47UH
D110 MTZJ-5.6B
C153 .022 T
R211 1K
R210 4.7K
C210 100P T
C209 100P T
C213 30P cc
X201 7.2MHZ
C214 30P cc
C147 .022 T
IC201 LC7218
XOUT VSS PD2 PD1 VDD FM IN AM IN OUT 6 H CTR L CTR ST/MONO AM/FM
XIN CE DI CLK DO SYC SD/IN AMST/IN AMST/MO FM B+ MW B+ SD
C215 22 16V
C211 100P T
R156 10k
R146 100
IC201 PLL
R215A 1K
CN101 11P
DO CLK DI CE +12V ST IND R G L MUTE
A MAIN BOARD CN101 (Page 44)


B+
C121
15P T
CF103
SFU450
CF104
10.7MS43_A
R120
3.3K
C122
2.2
50V
C123
1
50V
C124
20P
T
C125
1
50V
R119
4.70
IC102
IC102 LA1831
FM / AM
MPX
AMMIX
REG
AMIF
GND
TULED
STIND
FM DET
VCC
AM/FM
PHDET
PHDET
OSC
AFC
AMRF
SMET
AMHPF
AM/FM
MPXVCO
MPXIN
ROUT
LOUT
PLDET
C151
180P
T
R122
3.3K
C152
.0012
T
R121
3.3K
T101
FTZ.FILTER
TP1
C129
1
50V
C130
0.018
MC
C131
0.018
MC
CF105
CSB 456F15
C162
1
50V
C161
1
50V
C137
.47
50V
C138
.01
T
L107
47MH
C112
.0015
T
L108
47MH
C111
.0015
T
R127
6.8K
R125
6.8K
C132
.001
MC
R128
6.8K
R129
6.8K
C133
.001
MC
C215
22
16V
R212
10K
R146
100
C157
.001
T
MUTE

(Page 44)

5-13. SCHEMATIC DIAGRAM — TUNER SECTION — (E, AR, MX models)

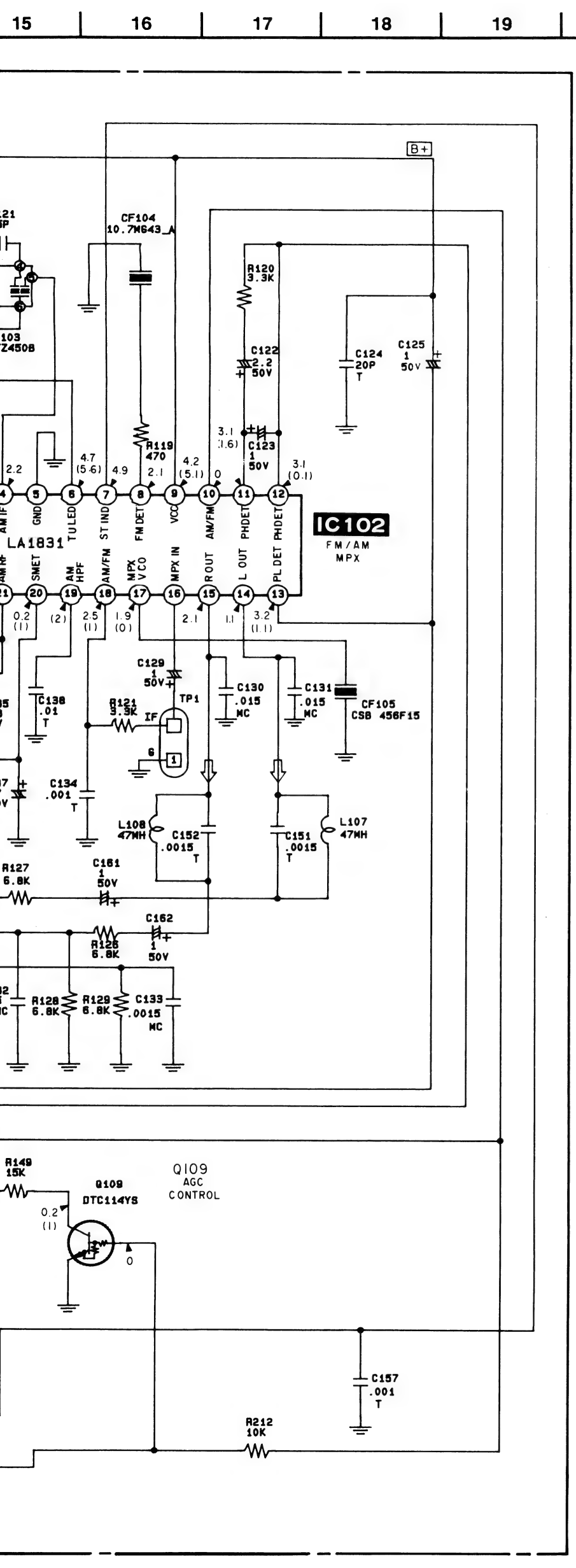
• See page 31 for IC Block Diagrams.



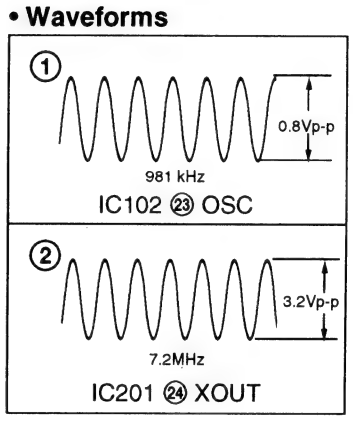
9 10 11 12 13 14 15 16 17 18 19 20

101
NT-END

R105 1K
R107 6.8K
Q101 2SC1675L
2.3
1.2
0.5
R106 3.3k
R108 330
C108 .022 T
CF102 10.7MS3
C118 100 16V
C160 .022 T
R115 22
Q101 FM IF AMP
B+
T102 AM IFT
C121 15P T
CF103 SFZ450B
CF104 10.7M643_A
R120 3.3K
C122 2.2 50V
C124 20P T
C125 1 50V
R118 100
R213 1 K
Q105 DTA114YS
4.6 (0)
4.7 (5.6)
1.2 (5.5)
Q105 FM B+ SWITCH
R112 100
C126 .047 T
C127 10 25V
C149 .022 T
(5.1)
2.1
2.2
2.2
4.7 (5.6)
4.9
2.1
4.2 (5.1)
0
3.1 (1.6)
3.1 (0.1)
R119 470
C123 1 50V
IC102 LA1831
FM/AM MPX
FMIF AM MIX REG AM IF GND TULED ST IND FMDET VCC AM/FM PHDET PLDET PHDET
OSC/FMSD OSC AFC AM RF SMET AM HPF AM/FM MPX VCO MPX IN ROUT L OUT PLDET PHDET
R123 8.2K
2.9 (3.7)
2.2 (2)
0.2 (1)
2.5 (1)
1.9 (0)
2.1
1.1
3.2 (1.1)
R122 3.3K
C128 .022 T
C135 3.3 50V
C138 .01 T
C129 1 50V
C130 .015 MC
C131 .015 MC
CF105 CSB 456F15
R121 3.3K
IF
TP1
FM TUNED LEVEL
SFR101 10k
R140 3.3K
R132 10K
R133 2.2K
C143 3.3 50V
C142 100 16V
C141 .022 T
R131 1K
C147 .022 T
C140 100 16V
C139 .022 T
D110 MTZJ-5.6B
R130 150 1/2W
L203 47UH
C137 .47 50V
C134 .001 T
L108 47MH
C152 .0015 T
L107 47MH
C151 .0015 T
C144 .01 T
Q108 2SC945P/Q
1.3 (1.1)
0.6
Q107 2SC945P/Q
1.1
R214 6.8K
C208 .01 T
C207 47 16V
C212 100P
C145 56P T
Q107,108 L.P.F
R127 6.8K
C161 1 50V
C162 1 50V
R126 6.8K
C132 .0015 MC
R128 6.8K
R129 6.8K
C133 .0015 MC
C153 .022 T
R211 1K
R210 4.7K
C210 100P T
C209 100P T
3.1 (4.8)
2 (0)
0 (2.4)
0 (5.5)
0 (1.5)
0
3.2 (0.1)
3.1 (0.1)
2.4
1.1
IC201 LC7218
XOUT VSS PD2 PDI VDD FM IN AM IN FM B+ H CTR L CTR ST/MONO AM/FM
XIN CE DI CLK DO SVC SD/IN INI SD
X201 7.2MHZ
C213 27P cc
C214 27P cc
C215 22 16V
C211 100P T
4.7 (5.6)
2.1
0
0
0
0
0
R149 15K
Q109 DTC114YS
Q109 AGC CONTROL
0.2 (1)
0
R155 10K
R212 10K
C157 .001 T
IC201 PLL
R215A 1K
CN101 11P
DO CLK DI CE +12V ST IND R G L MUTE
A MAIN BOARD CN101 (Page 40)



• **Waveforms**



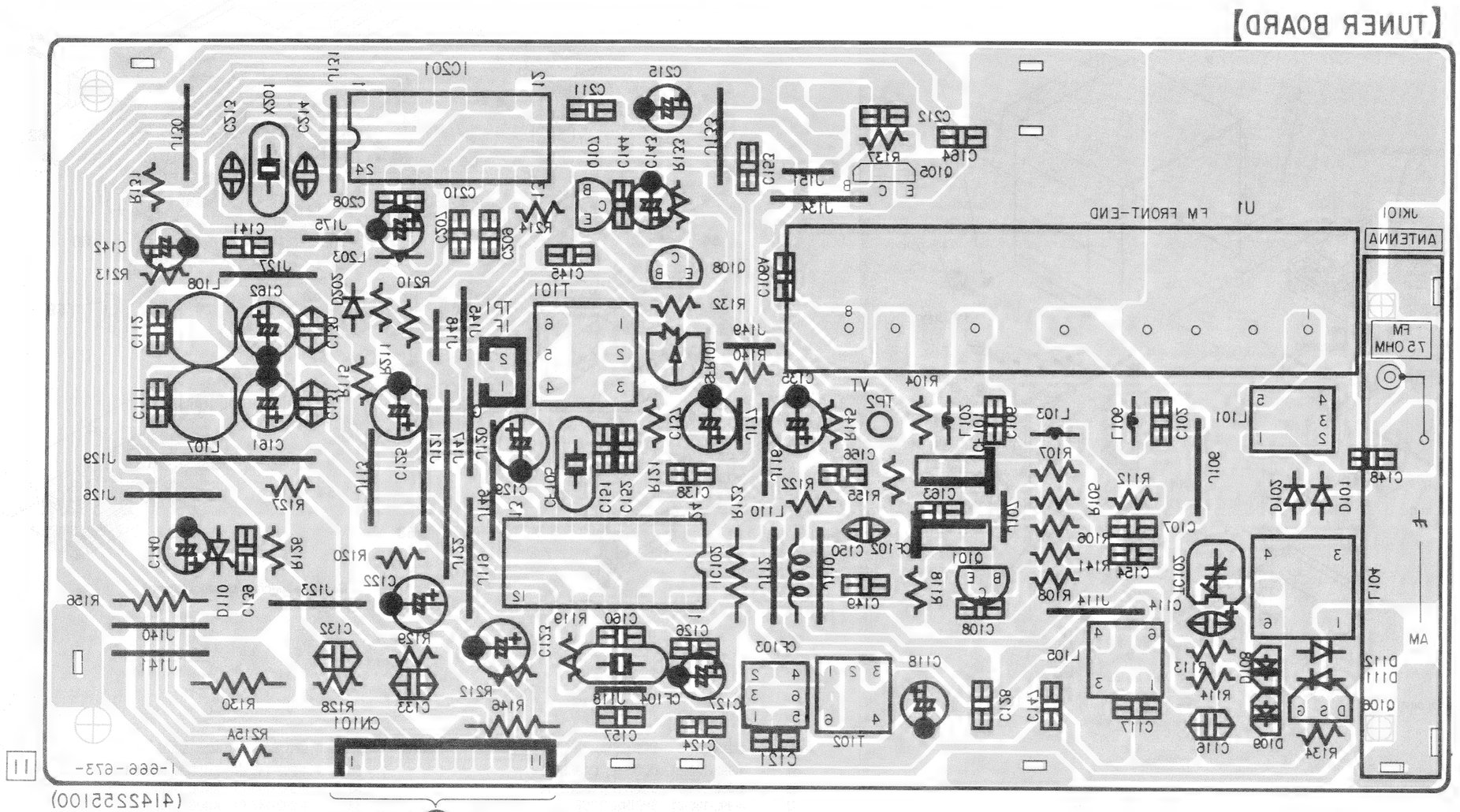
Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- : nonflammable resistor.
- : panel designation.
- B+ : B+ Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

5-15. PRINTED WIRING BOARD — TUNER SECTION — (AEP, UK models)

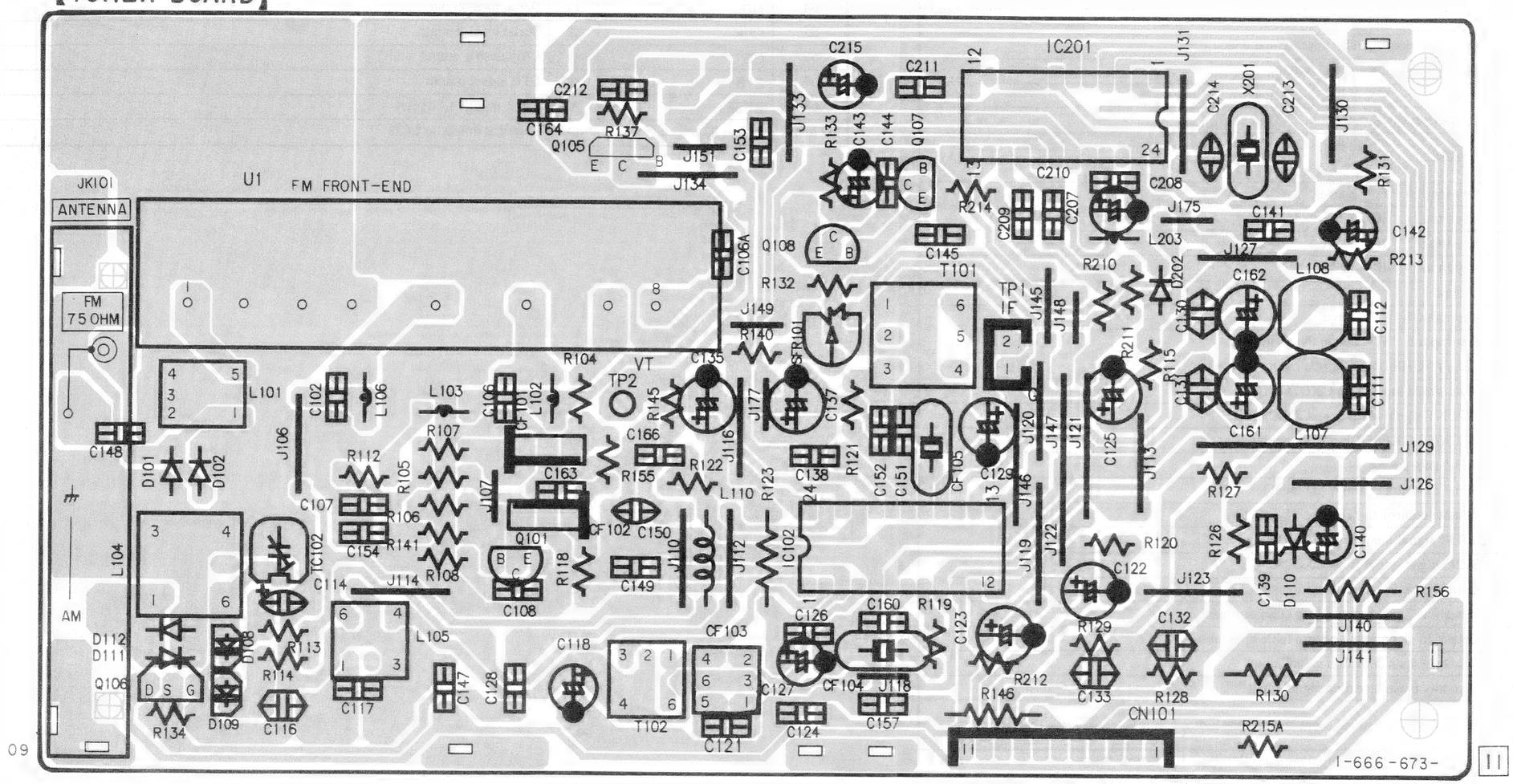
• See page 14 for Circuit Boards Location.

(Conductor Side) Note : Conductor side equal an inversion of component side.



(Component Side)

【TUNER BOARD】



(Page 50) A MAIN BOARD CN101

• **Semiconductor Location**

Ref. No.	Location
D101	C-1
D102	C-2
D108	D-2
D109	D-2
D110	C-6
D111	D-1
D112	C-1
D202	B-6
IC102	C-4
IC201	A-5
Q101	C-3
Q105	A-3
Q106	D-1
Q107	A-5
Q108	B-4

Note:

• ○—— : parts extracted from the component side.

5-16. IC PIN FUNCTION

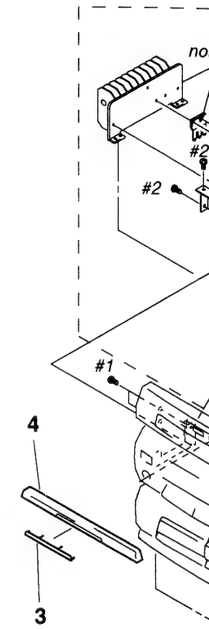
• IC601 System Controller, LCD driver (μPD753017AGC)

Pin No.	Pin Name	I/O	Function
1 to 12	S12 to S23	O	Segment output to LCD.
13	KO A	O	Key control signal output A "H" : active
14	KO B	O	Key control signal output B "H" : active
15	KO C	O	Key control signal output C "H" : active
16	TUNED	I	Turned detection signal from tuner
17	LATCH OUT	O	Latch output to LED driver "H" : active (Not used)
18	TAPE REC OUT	O	REC/PB select signal output to tape selector
19	TU MUTE OUT	O	Tuner mute control signal output
20	—	—	Not used
21 to 24	COM 1 to COM 3	O	LCD drive signal output
25	BIAS	O	Not used
26 to 28	VLC 0 to VLC 2	O	
29	KI 0	I	Key input 0 " H" : active
30	KI 1	I	Key input 1 " H" : active
31	KI 2	I	Key input 2 " H" : active
32	KI 3	I	Key input 3 " H" : active
33	VSS	—	Ground
34	KI 4	I	Key input 4 " H": active
35	KI 5	I	Key input 5 " H" : active (Not used)
36	SYC. REC IN	I	CD SYNCHRO REC signal input "L" : active
37	FOK	I	FOK signal input from CXD2508Q
38	COUNT	I	COUNT signal input from CXD2508Q
39	SQCK/MODE SW IN	I/O	SQCK/CLOK/MODE SW signal input/output
40	DATA	O	Serial data output
41	SQSO	I	Serial data input from CXD2508Q
42	REM. IN	I	Remote control signal input "L" : active
43	SCOR	I	SCOR signal input from CXD2508Q
44	SENS	I	SENS signal input from CXD2508Q
45	GFS	I	Optical pick-up down detection signal input "L" : down
46	DISC COUNT SW	I	Detection signal input of turn table position
47	TURN TABLE SW	I	Detection signal input of turn table operation
48	TRAY OPEN SW	I	Disc tray open detection signal input
49	TRAY CLOSE SW	I	Disc tray close detection signal input
50	VR UP	I/O	Volume encoder signal input and volume motor control signal output (Not used)
51	VR DOWN	I/O	
52	SYSTEM MUTE OUT	O	System mute control signal output "H" : ON
53	POWER OUT	O	Power ON/OFF control signal output "H" : OFF, "L" : ON
54	VDD	—	+5V power supply
55	POWER DOWN IN	I	Power down detect input "L" : active
56	OPEN	—	Not used
57	VDD	—	+5V power supply
58	X1	—	System clock (4.19 MHz)
59	X2	—	
60	XLAT	O	Latch signal output to CXD2508Q
61	FM ST IN	I	FM stereo detection signal input
62	DI 2	I	Optical pick-up up detection signal input
63	DI 1	I	Serial data input
64	DO	O	Serial data output
65	CLK	O	Serial clock output
66	CE	O	Chip enable output
67	STB	O	STB signal output
68	RESET	I	Reset input "L" : reset
69 to 80	S00 to S11	O	Segment output to LCD

• Abbreviation
LCD: Liquid Crystal Display

NOTE:
• Items marked "*" are no
seldom required for routi
should be anticipated whe
• The mechanical parts with
the exploded views are no

6-1. CASE AND BA



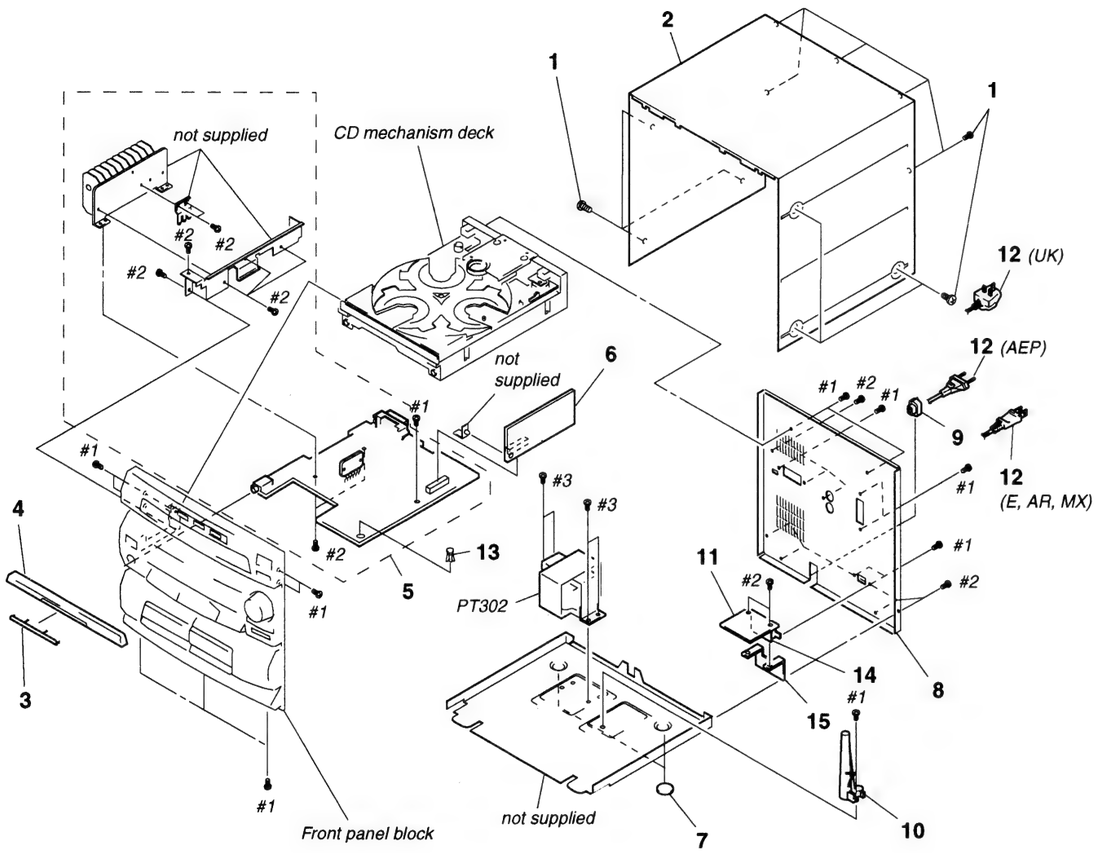
Ref. No.	Part No.
1	3-363-099-01
* 2	4-992-156-01
3	4-992-160-01
4	4-992-159-01
* 5	A-4398-915-A
* 5	A-4403-155-A
* 5	A-4403-222-A
* 6	A-4398-942-A
* 6	A-4403-154-A
7	4-992-154-01
* 8	4-992-155-01
* 8	4-993-075-01
* 8	4-993-737-01

SECTION 6
EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  MX : Mexican model
  AR : Argentine model

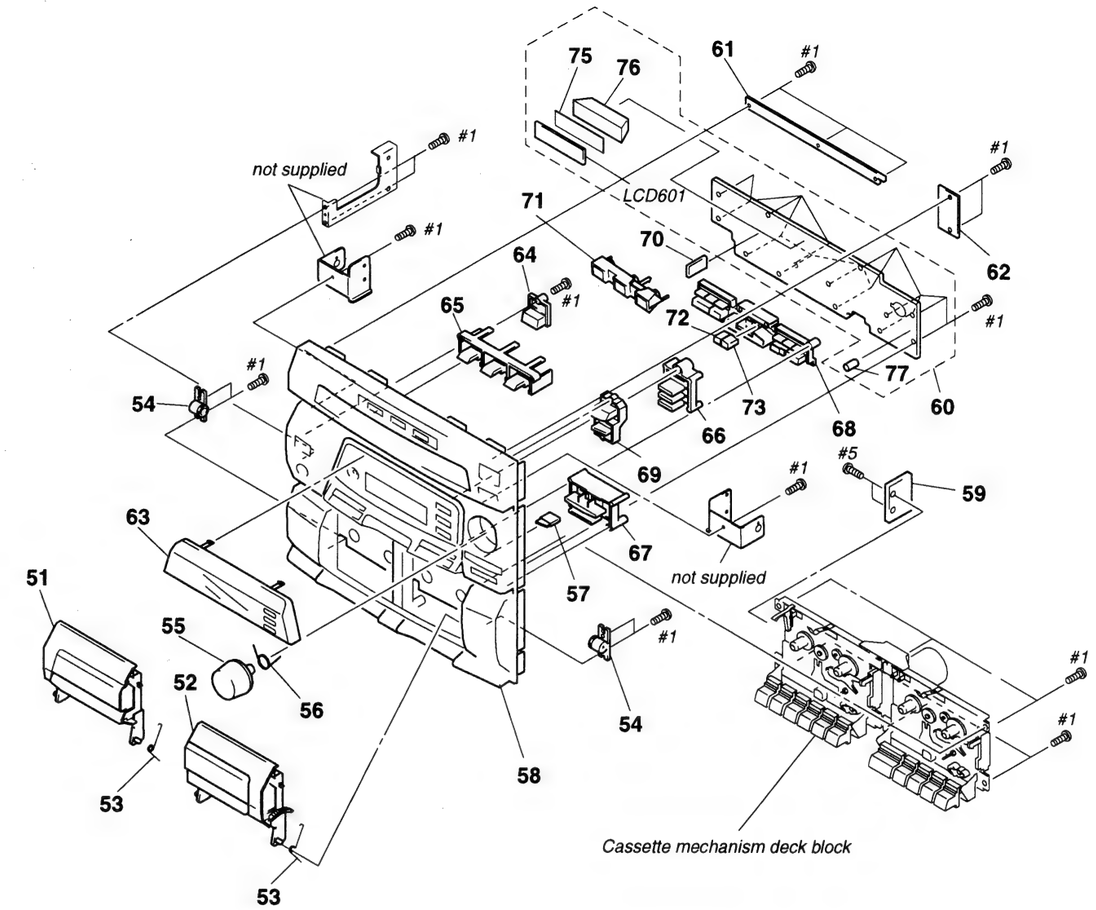
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CASE AND BACK PANEL SECTION



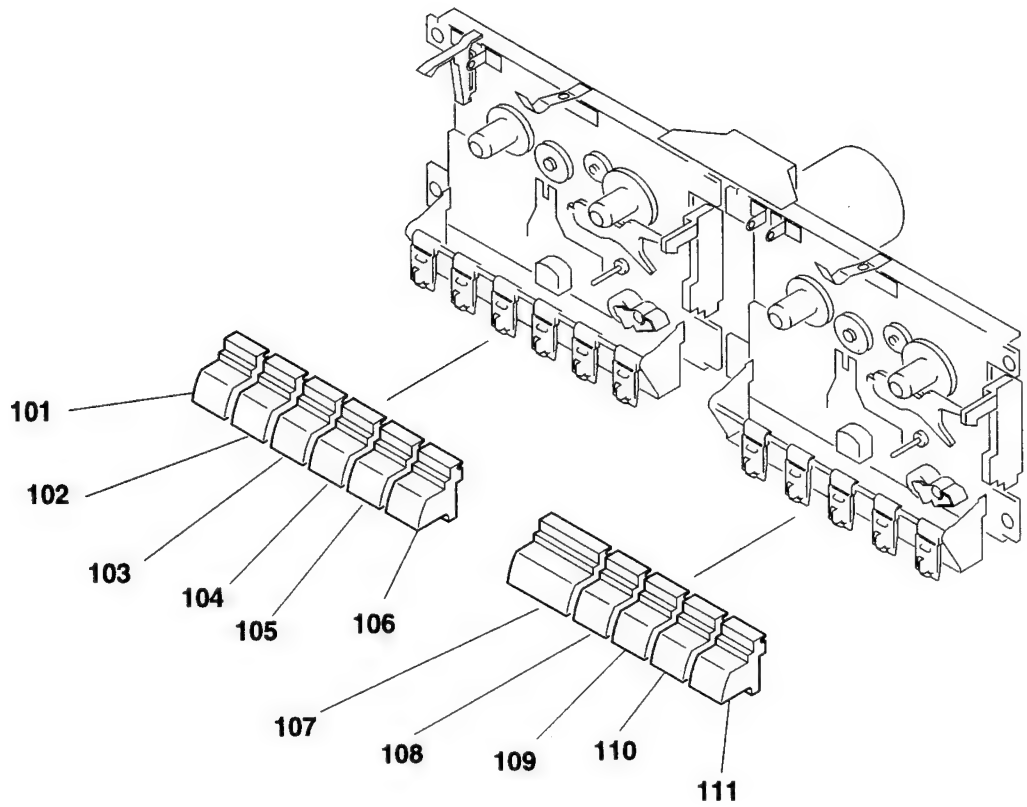
Ref. No.	Part No.	Description	Remark
1	3-363-099-01	SCREW (CASE 3 TP2) (MX)	
* 2	4-992-156-01	CASE	
3	4-992-160-01	COVER, CD DOOR	
4	4-992-159-01	DOOR, CD	
* 5	A-4398-915-A	MAIN BOARD, COMPLETE (MX)	
* 5	A-4403-155-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 5	A-4403-222-A	MAIN BOARD, COMPLETE (E,AR)	
* 6	A-4398-942-A	TUNER BOARD, COMPLETE (E,AR,MX)	
* 6	A-4403-154-A	TUNER BOARD, COMPLETE (AEP,UK)	
7	4-992-154-01	RUBBER, FOOT	
* 8	4-992-155-01	PANEL, BACK (MX)	
* 8	4-993-075-01	PANEL, BACK (AEP,UK)	
* 8	4-993-737-01	PANEL, BACK (E,AR)	
9	4-992-153-01	STOPPER (2271), CORD	
* 10	4-992-158-01	HOLDER, MAIN PC BOARD	
* 11	1-666-445-11	AC SUPPLY BOARD (E,AR,MX)	
* 11	1-666-674-11	AC POWER SUPPLY BOARD (AEP,UK)	
⚠12	1-551-506-XX	CORD, POWER (E,AR,MX)	
⚠12	1-696-572-21	CORD, POWER (UK)	
⚠12	1-765-558-11	CORD, POWER (AEP)	
13	3-531-576-11	RIVET	
* 14	1-666-452-11	VOL SELECT BOARD (E,AR)	
* 15	4-993-738-01	HOLDER, VOLTAGE SELECTION (SW) (E,AR)	
⚠PT302	1-431-461-11	TRANSFORMER, POWER (E,AR,MX)	
⚠PT302	1-431-462-11	TRANSFORMER, POWER (AEP,UK)	

6-2. FRONT PANEL SECTION



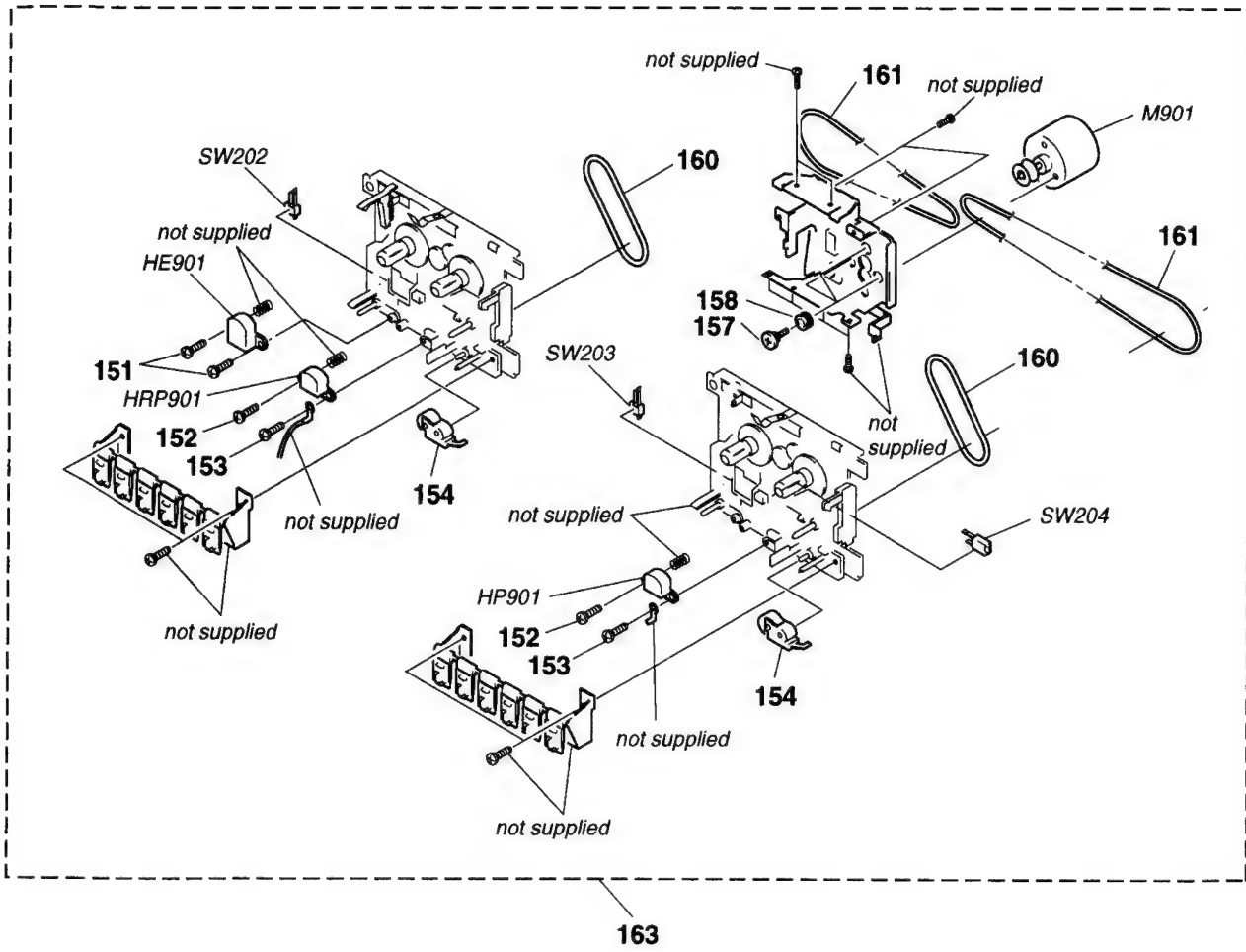
Ref. No.	Part No.	Description	Remark
51	4-992-128-01	DOOR (L), CASSETTE	
52	4-992-129-01	DOOR (R), CASSETTE	
53	4-992-130-01	SPRING, DOOR	
54	4-992-131-01	DAMPER (GRY), GEAR	
55	4-992-125-01	KNOB, VOLUME	
56	4-992-126-01	SPRING, VOLUME	
57	4-992-127-01	LENS, LED	
58	4-992-124-01	PANEL, FRONT	
* 59	1-666-444-11	R/P SWITCH BOARD	
* 60	A-4398-918-A	PANEL BOARD, COMPLETE (MX)	
* 60	A-4403-221-A	PANEL BOARD, COMPLETE (E,AR)	
* 60	A-4403-354-A	PANEL BOARD, COMPLETE (AEP,UK)	
* 61	1-666-438-11	DISC LED BOARD	
* 62	1-666-439-11	O/C BOARD	
63	4-993-074-01	WINDOW, DISPLAY	
64	4-992-145-01	BUTTON, POWER	
65	4-992-146-01	KNOB, DISC	
66	4-992-147-01	KNOB, TIMER	
67	4-992-148-01	KNOB, DBFB	
68	4-992-149-01	KNOB, FUNCTION	
69	4-992-150-01	KNOB, OPEN/CLOSE	
* 70	1-666-440-11	SENSOR BOARD	
71	4-993-057-01	HOLDER, LED	
72	4-993-076-01	KNOB (L), TAPE PHONO	
73	4-993-077-01	KNOB (R), TAPE PHONO	
75	4-992-826-01	PLATE, DISPLAY	
76	4-992-827-01	HOLDER, DISPLAY	
* 77	4-992-828-01	HOLDER (LED3-10), LED	
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL	

6-3. CASSETTE MECHANISM DECK SECTION 1



Ref. No.	Part No.	Description	Remark
101	4-992-133-01	BUTTON, REC	
102	4-992-134-01	BUTTON (A), PLAY	
103	4-992-135-01	BUTTON (A), REW	
104	4-992-136-01	BUTTON (A), F.F	
105	4-992-137-01	BUTTON (A), STOP/EJECT	
106	4-992-489-01	BUTTON (A), PAUSE	
107	4-992-139-01	BUTTON (B), PLAY	
108	4-992-140-01	BUTTON (B), REW	
109	4-992-141-01	BUTTON (B), F.F	
110	4-992-142-01	BUTTON (B), STOP/EJECT	
111	4-992-138-01	BUTTON (B), PAUSE	

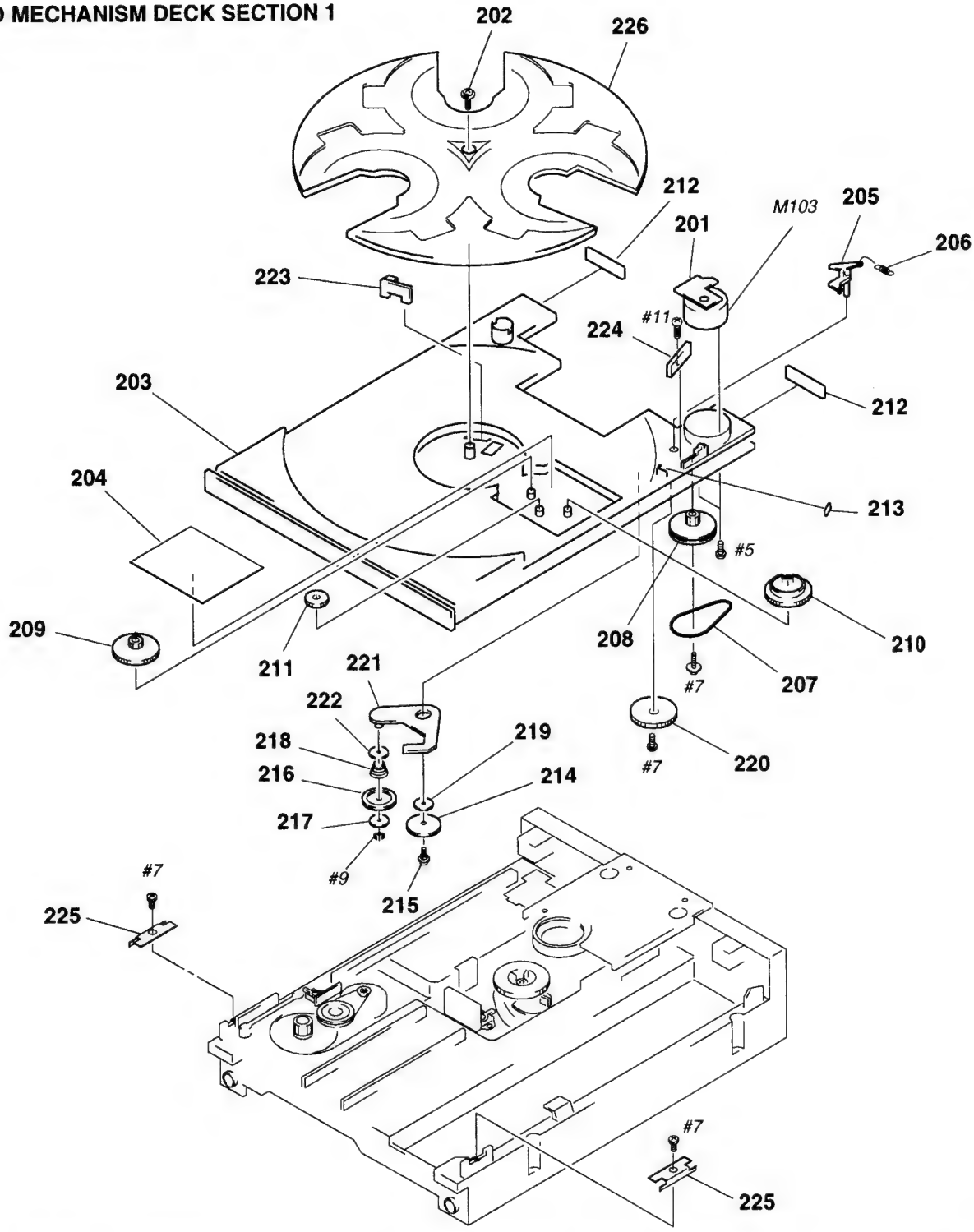
6-4. CASSETTE MECHANISM DECK SECTION 2



Ref. No.	Part No.	Description	Remark
151	9-980-282-01	E HEAD SCREW	
152	9-980-284-01	AZIMUTH SCREW	
153	9-980-283-01	HEAD SCREW ISO	
154	9-980-272-01	PINCH ROLLER ARM ASSY	
157	9-980-275-01	MOTOR COLLAR SCREW	
158	9-980-274-01	MOTOR RUBBER	
160	9-980-273-01	RF BELT	
161	9-980-277-01	MAIN BELT	
* 163	1-759-417-11	DECK, MECHANICAL	

Ref. No.	Part No.	Description	Remark
HE901	9-980-280-01	E HEAD (ERASE)	
HP901	9-980-287-01	HEAD (PLAY)	
HRP901	9-980-279-01	HEAD (REC/PLAY)	
M901	9-980-281-01	MOTOR (CAPSTAN/REEL)	
SW202	9-980-270-01	LEAF SWITCH (A DECK)	
SW203	9-980-270-01	LEAF SWITCH (B DECK)	
SW204	9-980-271-01	LEAF SWITCH (PLAY)	

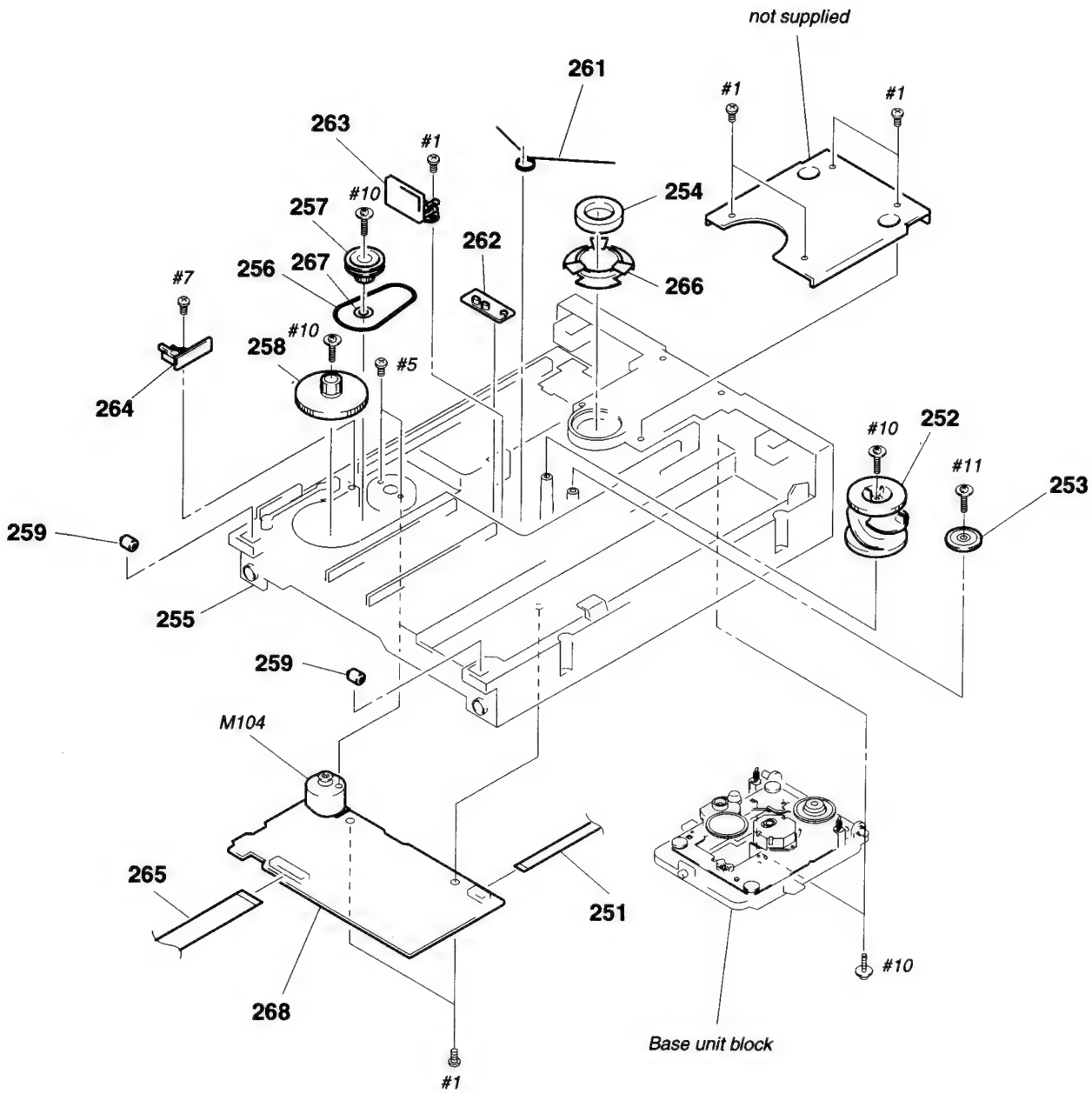
6-5. CD MECHANISM DECK SECTION 1



Ref. No.	Part No.	Description	Remark
* 201	1-666-451-11	MOTOR BOARD	
202	3-669-480-11	+ PTPWH 2	
203	4-992-168-01	TRAY, CHANGER BASE	
204	4-992-180-01	PLATE, BLIND	
205	4-992-181-01	LEVER, SENSOR (SW)	
206	4-992-182-01	SPRING, SENSOR (SW) LEVER	
207	4-992-170-01	BELT, LOADING	
208	4-992-171-01	PULLEY, GEAR	
209	4-992-179-01	GEAR, TR	
210	4-992-177-01	GEAR, TR LOCK	
211	4-992-178-01	GEAR (C), RELAY	
212	4-992-187-01	CUSHION	
213	4-992-186-01	CUSHION, SW LEVER	
214	4-992-173-01	GEAR (B), RELAY	

Ref. No.	Part No.	Description	Remark
215	4-992-183-01	SCREW, RELAY GEAR (B)	
216	4-992-174-01	GEAR, CHANGE	
217	4-992-184-01	WASHER, CHANGE GEAR	
218	4-992-176-01	SPRING, CHANGE GEAR	
219	4-992-185-01	WASHER, CHANGE PLATE	
220	4-992-172-01	GEAR (A), RELAY	
* 221	4-993-032-01	PLATE, CHANGE	
222	4-993-033-01	WASHER, POLY ETHYLENE	
* 223	1-666-448-11	SW (B) BOARD	
* 224	1-666-447-11	SW (A) BOARD	
* 225	4-993-034-01	GUIDE, RAIL	
226	4-993-140-01	TURN TABLE	
M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)	

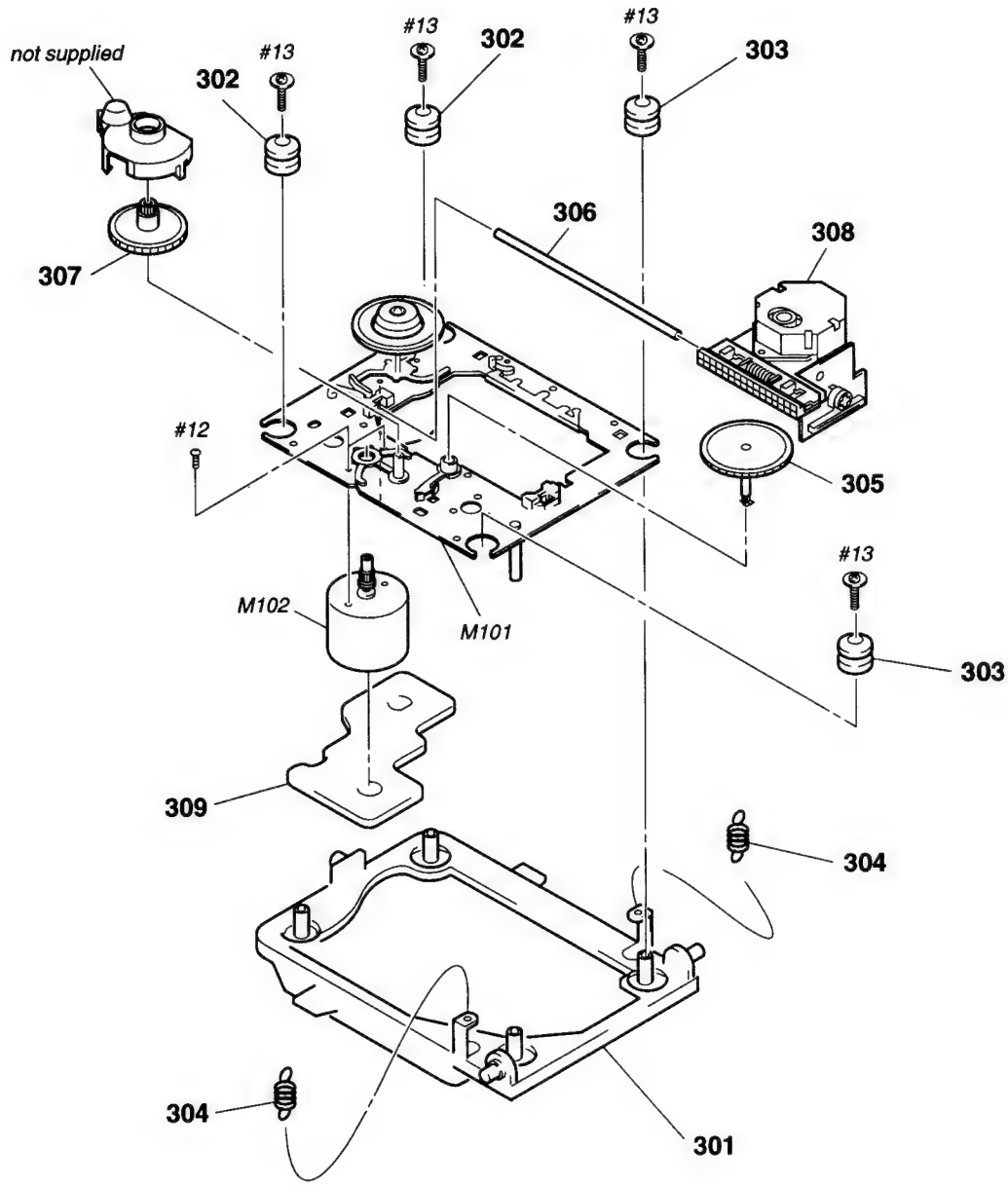
6-6. CD MECHANISM DECK SECTION 2



Ref. No.	Part No.	Description	Remark
251	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
252	4-992-190-01	UD-CAM	
253	4-992-191-01	UD-GEAR	
254	4-992-195-01	MAGNET	
* 255	4-992-196-01	CHASSIS, MAIN	
256	4-992-197-01	BELT, LOADING GEAR	
257	4-992-198-01	PULLEY (B), GEAR	
258	4-992-199-01	GEAR, SLIDE	
259	4-992-200-01	ROLLER	
261	4-992-192-01	SPRING, BRAKE CAM	

Ref. No.	Part No.	Description	Remark
262	4-992-193-01	LEVER, SW	
* 263	1-666-450-11	SW (D) BOARD	
* 264	1-666-449-11	SW (C) BOARD	
265	1-773-152-11	WIRE (FLAT TYPE) (21 CORE)	
266	4-992-194-01	CLAMP	
267	4-992-201-01	WASHER, POLYETHYLENE	
* 268	A-4398-909-A	CD DECODER BOARD, COMPLETE	
M104	X-4948-766-1	MOTOR ASSY (A) (TRAY)	

6-7. BASE UNIT SECTION (KSM-213BCM)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
301	4-992-164-01	BASE, KSM MECHANICAL	
302	4-992-165-01	DAMPER (GREEN)	
303	4-992-166-01	DAMPER (RED)	
304	4-992-167-01	SPRING, MECHANICAL BASE	
305	2-626-907-01	GEAR (A) (S)	
306	2-626-908-01	SHAFT, SLED	
307	2-627-003-02	GEAR (B)	
⚠308	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
* 309	1-639-678-12	MOTOR (6P)(S) BOARD	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	

AC POWER SUPPLY **AC SUPPLY**

CD DECODER

SECTION 7
ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μ A..., uPA...: μ PA..., uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation
  MX : Mexican model
  AR : Argentine model

Ref. No.	Part No.	Description			Remark
*	1-666-674-11	AC POWER SUPPLY BOARD (AEP,UK)			
		**********			
**********					
*	1-666-445-11	AC SUPPLY BOARD (E,AR,MX)			
		**********			
		< FUSE >			
⚠F801	1-532-465-31	FUSE (T3.15A/250V)			
* F801HA	1-533-213-31	HOLDER, FUSE (E,AR)			
* F801HB	1-533-213-31	HOLDER, FUSE (E,AR)			
**********					
*	A-4398-909-A	CD DECODER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C02	1-126-963-11	ELECT	4.7uF	20%	50V
C03	1-126-933-11	ELECT	100uF	20%	10V
C04	1-162-306-11	CERAMIC	0.01uF	20%	16V
C05	1-136-159-00	FILM	0.033uF	5%	50V
C06	1-162-306-11	CERAMIC	0.01uF	20%	16V
C07	1-136-159-00	FILM	0.033uF	5%	50V
C07A	1-162-199-31	CERAMIC	10PF	5%	50V
C08	1-161-494-00	CERAMIC	0.022uF		25V
C09	1-126-959-11	ELECT	0.47uF	20%	50V
C10	1-162-306-11	CERAMIC	0.01uF	20%	16V
C11	1-126-933-11	ELECT	100uF	20%	10V
C11A	1-164-159-11	CERAMIC	0.1uF		50V
C12	1-162-306-11	CERAMIC	0.01uF	20%	16V
C13	1-164-159-11	CERAMIC	0.1uF		50V
C14	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C15	1-164-159-11	CERAMIC	0.1uF		50V
C16	1-136-159-00	FILM	0.033uF	5%	50V
C17	1-136-165-00	FILM	0.1uF	5%	50V
C18	1-164-159-11	CERAMIC	0.1uF		50V
C19	1-126-963-11	ELECT	4.7uF	20%	50V
C20	1-162-306-11	CERAMIC	0.01uF	20%	16V
C21	1-136-157-00	FILM	0.022uF	5%	50V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-164-159-11	CERAMIC	0.1uF		50V
C24	1-126-965-11	ELECT	22uF	20%	50V
C25	1-126-960-11	ELECT	1uF	20%	50V
C26	1-161-494-00	CERAMIC	0.022uF	30%	25V
C27	1-162-306-11	CERAMIC	0.01uF	20%	16V
C28	1-164-159-11	CERAMIC	0.1uF		50V
C29	1-126-935-11	ELECT	470uF	20%	16V
C30	1-126-933-11	ELECT	100uF	20%	10V
C31	1-162-600-11	CERAMIC	0.047uF	10%	16V
C32	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C33	1-162-306-11	CERAMIC	0.01uF	20%	16V
C34	1-162-286-31	CERAMIC	220PF	10%	50V
C35	1-162-306-11	CERAMIC	0.01uF	20%	16V
C36	1-126-963-11	ELECT	4.7uF	20%	50V
C37	1-164-159-11	CERAMIC	0.1uF		50V
C38	1-102-958-00	CERAMIC	20PF	5%	50V
C39	1-102-958-00	CERAMIC	20PF	5%	50V
C42	1-126-012-11	ELECT	470uF	20%	16V
C43	1-126-933-11	ELECT	100uF	20%	10V
C45	1-126-923-11	ELECT	220uF	20%	10V
C46	1-126-933-11	ELECT	100uF	20%	10V
C51	1-162-288-31	CERAMIC	330PF	10%	50V
C51A	1-126-959-11	ELECT	0.47uF	20%	50V
C52	1-162-288-31	CERAMIC	330PF	10%	50V
C53	1-162-284-31	CERAMIC	150PF	10%	50V
C54	1-162-284-31	CERAMIC	150PF	10%	50V
C55	1-162-284-31	CERAMIC	150PF	10%	50V
C56	1-162-284-31	CERAMIC	150PF	10%	50V
C57	1-126-961-11	ELECT	2.2uF	20%	50V
C58	1-126-961-11	ELECT	2.2uF	20%	50V
C59	1-162-294-31	CERAMIC	0.001uF	10%	50V
C60	1-162-294-31	CERAMIC	0.001uF	10%	50V
C80	1-164-159-11	CERAMIC	0.1uF		50V
C81	1-164-159-11	CERAMIC	0.1uF		50V
C82	1-164-159-11	CERAMIC	0.1uF		50V
C83	1-164-159-11	CERAMIC	0.1uF		50V
C84	1-162-282-31	CERAMIC	100PF	10%	50V
C85	1-162-292-31	CERAMIC	680PF	10%	50V
C86	1-162-282-31	CERAMIC	100PF	10%	50V
C86A	1-161-494-00	CERAMIC	0.022uF		25V
C87	1-162-282-31	CERAMIC	100PF	10%	50V
C88	1-162-282-31	CERAMIC	100PF	10%	50V
C89	1-161-494-00	CERAMIC	0.022uF		25V
C90	1-161-494-00	CERAMIC	0.022uF		25V
C93	1-126-925-11	ELECT	470uF	20%	10V
C94	1-126-933-11	ELECT	100uF	20%	10V
C98	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN01	1-580-475-11	SOCKET, CONNECTOR 16P			
CN05	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CN06	1-695-366-21	PIN, CONNECTOR (PC BOARD) 5P			
CN09	1-770-528-31	PIN, CONNECTOR (PC BOARD) 21P			

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D01	8-719-987-63	DIODE 1N4148M				
D03	8-719-109-89	DIODE RD5.6ESB2				
D09	8-719-109-93	DIODE RD6.2ESB2				
D20	8-719-987-63	DIODE 1N4148M				
D21	8-719-987-63	DIODE 1N4148M				
D22	8-719-987-63	DIODE 1N4148M				
D23	8-719-987-63	DIODE 1N4148M				
D24	8-719-987-63	DIODE 1N4148M				
D25	8-719-987-63	DIODE 1N4148M				
D26	8-719-987-63	DIODE 1N4148M				
D27	8-719-987-63	DIODE 1N4148M				
D35	8-719-982-11	DIODE MTZJ-4.3B				
D36	8-719-031-85	DIODE 1N4002L				
		< IC >				
IC01	8-752-069-56	IC CXA1782BQ				
IC02	8-759-388-27	IC TC9173P				
IC03	8-759-429-31	IC BA5941FP				
IC04	8-752-369-28	IC CXD2508Q				
IC05	8-759-505-55	IC NJM4558L				
		< COIL >				
L01	1-410-509-11	INDUCTOR 10uH				
		< TRANSISTOR >				
Q01	8-729-195-23	TRANSISTOR 2SA952				
Q02	8-729-195-23	TRANSISTOR 2SA952				
Q04	8-729-194-57	TRANSISTOR 2SC945-P				
Q05	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q06	8-729-195-23	TRANSISTOR 2SA952				
Q07	8-729-195-23	TRANSISTOR 2SA952				
Q08	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q09	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q10	8-729-195-23	TRANSISTOR 2SA952				
Q11	8-729-195-23	TRANSISTOR 2SA952				
Q12	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q13	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q14	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q15	8-729-142-46	TRANSISTOR 2SC2001-LK				
		< RESISTOR >				
R01	1-249-459-11	CARBON	12K	5%	1/4W	
R02	1-249-430-11	CARBON	12K	5%	1/4W	
R03	1-249-397-11	CARBON	22	5%	1/4W	F
R05	1-247-863-11	CARBON	22K	5%	1/4W	
R06	1-247-847-11	CARBON	4.7K	5%	1/4W	
R07	1-249-430-11	CARBON	12K	5%	1/4W	
R07A	1-249-430-11	CARBON	12K	5%	1/4W	
R07B	1-249-430-11	CARBON	12K	5%	1/4W	
R08	1-249-460-11	CARBON	15K	5%	1/4W	
R09	1-249-460-11	CARBON	15K	5%	1/4W	
R10	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R11	1-249-438-11	CARBON	56K	5%	1/4W	F
R12	1-247-879-11	CARBON	100K	5%	1/4W	
R13	1-247-896-11	CARBON	510K	5%	1/4W	
R14	1-247-879-11	CARBON	100K	5%	1/4W	

Ref. No.	Part No.	Description			Remark
R15	1-247-881-00	CARBON	120K	5%	1/4W
R16	1-247-887-00	CARBON	220K	5%	1/4W
R17	1-247-879-11	CARBON	100K	5%	1/4W
R18	1-249-428-11	CARBON	8.2K	5%	1/4W F
R19	1-249-431-11	CARBON	15K	5%	1/4W
R21	1-247-863-11	CARBON	22K	5%	1/4W
R22	1-247-879-11	CARBON	100K	5%	1/4W
R23	1-249-430-11	CARBON	12K	5%	1/4W
R24	1-247-883-00	CARBON	150K	5%	1/4W
R25	1-247-879-11	CARBON	100K	5%	1/4W
R26	1-249-855-11	CARBON	10K	5%	1/4W
R27	1-249-430-11	CARBON	12K	5%	1/4W
R28	1-249-855-11	CARBON	10K	5%	1/4W
R29	1-249-843-11	CARBON	3.3K	5%	1/4W
R30	1-249-843-11	CARBON	3.3K	5%	1/4W
R31	1-249-855-11	CARBON	10K	5%	1/4W
R32	1-247-903-00	CARBON	1M	5%	1/4W
R33	1-249-855-11	CARBON	10K	5%	1/4W
R34	1-247-879-11	CARBON	100K	5%	1/4W
R35	1-249-847-11	CARBON	4.7K	5%	1/4W
R36	1-249-847-11	CARBON	4.7K	5%	1/4W
R37	1-247-807-11	CARBON	100	5%	1/4W
R38	1-247-807-11	CARBON	100	5%	1/4W
R39	1-249-847-11	CARBON	4.7K	5%	1/4W
R40	1-249-847-11	CARBON	4.7K	5%	1/4W
R41	1-247-807-11	CARBON	100	5%	1/4W
R42	1-247-807-11	CARBON	100	5%	1/4W
R44	1-247-807-11	CARBON	100	5%	1/4W
R44A	1-249-847-11	CARBON	4.7K	5%	1/4W
R46	1-249-855-11	CARBON	10K	5%	1/4W
R46A	1-249-409-11	CARBON	220	5%	1/4W F
R50	1-249-847-11	CARBON	4.7K	5%	1/4W
R50A	1-247-721-11	CARBON	4.7K	5%	1/4W F
R52	1-247-721-11	CARBON	4.7K	5%	1/4W F
R53	1-249-411-11	CARBON	330	5%	1/4W
R55	1-249-847-11	CARBON	4.7K	5%	1/4W
R56	1-249-847-11	CARBON	4.7K	5%	1/4W
R57	1-249-427-11	CARBON	6.8K	5%	1/4W F
R58	1-249-442-11	CARBON	510	5%	1/4W
R59	1-247-903-00	CARBON	1M	5%	1/4W
R61	1-249-855-11	CARBON	10K	5%	1/4W
R62	1-249-855-11	CARBON	10K	5%	1/4W
R63	1-249-855-11	CARBON	10K	5%	1/4W
R64	1-249-855-11	CARBON	10K	5%	1/4W
R65	1-247-864-11	CARBON	24K	5%	1/4W
R66	1-247-864-11	CARBON	24K	5%	1/4W
R67	1-247-864-11	CARBON	24K	5%	1/4W
R68	1-247-864-11	CARBON	24K	5%	1/4W
R69	1-249-430-11	CARBON	12K	5%	1/4W
R70	1-249-430-11	CARBON	12K	5%	1/4W
R71	1-249-430-11	CARBON	12K	5%	1/4W
R72	1-249-430-11	CARBON	12K	5%	1/4W
R73	1-249-839-11	CARBON	2.2K	5%	1/4W
R74	1-249-839-11	CARBON	2.2K	5%	1/4W
R75	1-249-847-11	CARBON	4.7K	5%	1/4W
R76	1-249-847-11	CARBON	4.7K	5%	1/4W
R78	1-249-847-11	CARBON	4.7K	5%	1/4W

CD DECODER | DISC LED | MAIN

Ref. No.	Part No.	Description			Remark
R79	1-249-405-11	CARBON	100	5%	1/4W F
R80	1-247-883-00	CARBON	150K	5%	1/4W
R81	1-247-807-11	CARBON	100	5%	1/4W
R82	1-247-807-11	CARBON	100	5%	1/4W
R83	1-249-469-11	CARBON	100K	5%	1/4W
R83A	1-247-863-11	CARBON	22K	5%	1/4W
R84	1-249-465-11	CARBON	47K	5%	1/4W
R85	1-249-465-11	CARBON	47K	5%	1/4W
R86	1-249-465-11	CARBON	47K	5%	1/4W
R87	1-249-465-11	CARBON	47K	5%	1/4W
R88	1-249-469-11	CARBON	100K	5%	1/4W
R89	1-249-839-11	CARBON	2.2K	5%	1/4W
R90	1-249-839-11	CARBON	2.2K	5%	1/4W
R91	1-249-839-11	CARBON	2.2K	5%	1/4W
R92	1-249-839-11	CARBON	2.2K	5%	1/4W
R93	1-249-420-11	CARBON	1.8K	5%	1/4W F
R93A	1-249-420-11	CARBON	1.8K	5%	1/4W F
R94	1-249-420-11	CARBON	1.8K	5%	1/4W F
R94A	1-249-420-11	CARBON	1.8K	5%	1/4W F
R99	1-247-704-11	CARBON	220	5%	1/4W F
		< VARIABLE RESISTOR >			
VR01	1-228-996-00	RES, ADJ, METAL 47K			
VR02	1-228-998-00	RES, ADJ, METAL 220K			
		< VIBRATOR >			
XTL01	1-760-123-11	VIBRATOR, CRYSTAL (33.8688MHz)			

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*	1-666-438-11	DISC LED BOARD
		**********
*	4-992-828-01	HOLDER (LED3-10), LED
		< DIODE >
LED602	8-719-046-80	DIODE SML19416W-TP4 (DISC 1)
LED603	8-719-046-80	DIODE SML19416W-TP4 (DISC 2)
LED604	8-719-046-80	DIODE SML19416W-TP4 (DISC 3)

< RESISTOR >

R630	1-249-408-11	CARBON	180	5%	1/4W F
R631	1-249-408-11	CARBON	180	5%	1/4W F
R632	1-249-408-11	CARBON	180	5%	1/4W F

< SWITCH >

S624	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 1)
S625	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 2)
S626	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 3)

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*	A-4398-915-A	MAIN BOARD, COMPLETE (MX)
		**********
*	A-4403-222-A	MAIN BOARD, COMPLETE (E,AR)
		**********
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C1	1-161-494-00	CERAMIC	0.022uF		25V
C2	1-161-494-00	CERAMIC	0.022uF		25V
C201	1-162-286-31	CERAMIC	220PF	10%	50V
C202	1-162-286-31	CERAMIC	220PF	10%	50V
C203	1-162-292-31	CERAMIC	680PF	10%	50V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-162-286-31	CERAMIC	220PF	10%	50V
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C207	1-126-964-11	ELECT	10uF	20%	50V
C208	1-126-964-11	ELECT	10uF	20%	50V
C209	1-130-485-00	MYLAR	0.015uF	5%	50V
C210	1-130-485-00	MYLAR	0.015uF	5%	50V
C211	1-126-044-11	ELECT	1uF	20%	50V
C212	1-126-044-11	ELECT	1uF	20%	50V
C215	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C216	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C217	1-162-286-31	CERAMIC	220PF	10%	50V
C218	1-162-286-31	CERAMIC	220PF	10%	50V
C219	1-126-962-11	ELECT	3.3uF	20%	50V
C220	1-126-962-11	ELECT	3.3uF	20%	50V
C221	1-126-644-11	ELECT	100uF	20%	16V
C222	1-126-644-11	ELECT	100uF	20%	16V
C223	1-162-294-31	CERAMIC	0.001uF	10%	50V
C224	1-162-294-31	CERAMIC	0.001uF	10%	50V
C225	1-126-962-11	ELECT	3.3uF	20%	50V
C226	1-126-962-11	ELECT	3.3uF	20%	50V
C228	1-126-964-11	ELECT	10uF	20%	50V
C230	1-137-350-11	FILM	0.015uF	5%	100V
C231	1-137-150-11	FILM	0.01uF	5%	100V
C232	1-130-479-00	MYLAR	0.0047uF	5%	50V
C233	1-130-487-00	MYLAR	0.022uF	5%	50V
C234	1-124-910-11	ELECT	47uF	20%	50V
C235	1-161-494-00	CERAMIC	0.022uF		25V
C237	1-126-025-11	ELECT	330uF	20%	16V
C238	1-126-962-11	ELECT	3.3uF	20%	50V
C239	1-162-292-31	CERAMIC	680PF	10%	50V
C240	1-162-292-31	CERAMIC	680PF	10%	50V
C241	1-126-644-11	ELECT	100uF	20%	16V
C242	1-126-959-11	ELECT	0.47uF	20%	50V
C243	1-126-961-11	ELECT	2.2uF	20%	50V
C281	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C282	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C300	1-164-159-11	CERAMIC	0.1uF		50V
C301	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C302	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-162-282-31	CERAMIC	100PF	10%	50V
C305	1-162-290-31	CERAMIC	470PF	10%	50V
C306	1-162-290-31	CERAMIC	470PF	10%	50V
C307	1-126-963-11	ELECT	4.7uF	20%	50V
C308	1-126-963-11	ELECT	4.7uF	20%	50V
C309	1-162-294-31	CERAMIC	0.001uF	10%	50V
C310	1-162-294-31	CERAMIC	0.001uF	10%	50V
C313	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C314	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C315	1-130-494-11	MYLAR	0.082uF	5%	50V

Ref. No.	Part No.	Description			Remark
C316	1-130-494-11	MYLAR	0.082uF	5%	50V
C317	1-126-959-11	ELECT	0.47uF	20%	50V
C318	1-126-959-11	ELECT	0.47uF	20%	50V
C319	1-126-644-11	ELECT	100uF	20%	16V
C320	1-126-644-11	ELECT	100uF	20%	16V
C401	1-162-288-31	CERAMIC	330PF	10%	50V
C402	1-162-288-31	CERAMIC	330PF	10%	50V
C403	1-126-959-11	ELECT	0.47uF	20%	50V
C404	1-126-959-11	ELECT	0.47uF	20%	50V
C405	1-126-959-11	ELECT	0.47uF	20%	50V
C406	1-126-959-11	ELECT	0.47uF	20%	50V
C407	1-126-959-11	ELECT	0.47uF	20%	50V
C408	1-126-959-11	ELECT	0.47uF	20%	50V
C409	1-126-959-11	ELECT	0.47uF	20%	50V
C410	1-126-959-11	ELECT	0.47uF	20%	50V
C411	1-162-199-31	CERAMIC	10PF	5%	50V
C412	1-162-199-31	CERAMIC	10PF	5%	50V
C415	1-162-290-31	CERAMIC	470PF	10%	50V
C416	1-162-290-31	CERAMIC	470PF	10%	50V
C417	1-130-485-00	MYLAR	0.015uF	5%	50V
C418	1-130-485-00	MYLAR	0.015uF	5%	50V
C419	1-162-292-31	CERAMIC	680PF	10%	50V
C420	1-162-292-31	CERAMIC	680PF	10%	50V
C421	1-162-294-31	CERAMIC	0.001uF	10%	50V
C422	1-162-294-31	CERAMIC	0.001uF	10%	50V
C425	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C426	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C427	1-130-485-00	MYLAR	0.015uF	5%	50V
C428	1-130-485-00	MYLAR	0.015uF	5%	50V
C429	1-162-284-31	CERAMIC	150PF	10%	50V
C430	1-162-284-31	CERAMIC	150PF	10%	50V
C431	1-162-305-11	CERAMIC	0.0068uF	20%	16V
C432	1-162-305-11	CERAMIC	0.0068uF	20%	16V
C433	1-126-934-11	ELECT	220uF	20%	16V
C434	1-126-934-11	ELECT	220uF	20%	16V
C451	1-126-959-11	ELECT	0.47uF	20%	50V
C452	1-126-959-11	ELECT	0.47uF	20%	50V
C453	1-162-282-31	CERAMIC	100PF	10%	50V
C454	1-162-282-31	CERAMIC	100PF	10%	50V
C455	1-124-767-00	ELECT	2.2uF	20%	50V
C456	1-124-767-00	ELECT	2.2uF	20%	50V
C457	1-126-934-11	ELECT	220uF	20%	16V
C458	1-126-964-11	ELECT	10uF	20%	50V
C459	1-164-159-11	CERAMIC	0.1uF		50V
C460	1-164-159-11	CERAMIC	0.1uF		50V
C461	1-126-964-11	ELECT	10uF	20%	50V
C462	1-126-964-11	ELECT	10uF	20%	50V
C463	1-126-934-11	ELECT	220uF	20%	16V
C471	1-162-282-31	CERAMIC	100PF	10%	50V
C472	1-162-282-31	CERAMIC	100PF	10%	50V
C473	1-162-282-31	CERAMIC	100PF	10%	50V
C474	1-162-282-31	CERAMIC	100PF	10%	50V
C475	1-124-767-00	ELECT	2.2uF	20%	50V
C476	1-124-767-00	ELECT	2.2uF	20%	50V
C477	1-124-767-00	ELECT	2.2uF	20%	50V
C478	1-124-767-00	ELECT	2.2uF	20%	50V
C479	1-126-644-11	ELECT	100uF	20%	16V
C480	1-126-644-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remark
C491	1-126-044-11	ELECT	1uF	20%	50V
C492	1-126-044-11	ELECT	1uF	20%	50V
C493	1-162-215-31	CERAMIC	47PF	5%	50V
C494	1-162-215-31	CERAMIC	47PF	5%	50V
C495	1-126-959-11	ELECT	0.47uF	20%	50V
C496	1-126-959-11	ELECT	0.47uF	20%	50V
C497	1-126-644-11	ELECT	100uF	20%	16V
C499	1-126-964-11	ELECT	10uF	20%	50V
C500	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C502	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C505	1-126-964-11	ELECT	10uF	20%	50V
C506	1-126-964-11	ELECT	10uF	20%	50V
C507	1-126-968-11	ELECT	100uF	20%	50V
C508	1-126-969-11	ELECT	220uF	20%	50V
C509	1-126-969-11	ELECT	220uF	20%	50V
C510	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-162-195-31	CERAMIC	4.7PF	10%	50V
C512	1-162-195-31	CERAMIC	4.7PF	10%	50V
C513	1-137-354-11	FILM	0.1uF	5%	100V
C514	1-137-354-11	FILM	0.1uF	5%	100V
C515	1-126-968-11	ELECT	100uF	20%	50V
C516	1-164-159-11	CERAMIC	0.1uF		50V
C517	1-126-968-11	ELECT	100uF	20%	50V
C523	1-164-159-11	CERAMIC	0.1uF		50V
C524	1-164-159-11	CERAMIC	0.1uF		50V
C551	1-161-494-00	CERAMIC	0.022uF		25V
C552	1-161-494-00	CERAMIC	0.022uF		25V
C553	1-126-044-11	ELECT	1uF	20%	50V
C554	1-162-306-11	CERAMIC	0.01uF	20%	16V
C555	1-126-644-11	ELECT	100uF	20%	16V
C556	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C557	1-126-963-11	ELECT	4.7uF	20%	50V
C558	1-126-644-11	ELECT	100uF	20%	16V
C581	1-124-910-11	ELECT	47uF	20%	50V
C582	1-164-159-11	CERAMIC	0.1uF		50V
C583	1-126-644-11	ELECT	100uF	20%	16V
C701	1-126-974-11	ELECT	3300uF	20%	50V
C702	1-126-974-11	ELECT	3300uF	20%	50V
C708	1-161-494-00	CERAMIC	0.022uF		25V
C709	1-161-494-00	CERAMIC	0.022uF		25V
C710	1-126-943-11	ELECT	2200uF	20%	25V
C711	1-124-910-11	ELECT	47uF	20%	50V
C712	1-126-644-11	ELECT	100uF	20%	16V
C713	1-161-494-00	CERAMIC	0.022uF		25V
C714	1-161-494-00	CERAMIC	0.022uF		25V
C715	1-161-494-00	CERAMIC	0.022uF		25V
C716	1-126-644-11	ELECT	100uF	20%	16V
C717	1-126-644-11	ELECT	100uF	20%	16V
C718	1-126-012-11	ELECT	470uF	20%	16V
C719	1-161-494-00	CERAMIC	0.022uF		25V
C720	1-126-644-11	ELECT	100uF	20%	16V
C721	1-161-494-00	CERAMIC	0.022uF		25V
C722	1-126-012-11	ELECT	470uF	20%	16V
C723	1-161-494-00	CERAMIC	0.022uF		25V
C724	1-126-644-11	ELECT	100uF	20%	16V
C725	1-161-494-00	CERAMIC	0.022uF		25V

MAIN

Ref. No.	Part No.	Description			Remark
C726	1-126-644-11	ELECT	100uF	20%	16V
C727	1-161-494-00	CERAMIC	0.022uF		25V
C728	1-126-644-11	ELECT	100uF	20%	16V
C729	1-161-494-00	CERAMIC	0.022uF		25V
C730	1-126-376-11	ELECT	470uF	20%	25V
C731	1-161-494-00	CERAMIC	0.022uF		25V
C732	1-126-644-11	ELECT	100uF	20%	16V
C733	1-161-494-00	CERAMIC	0.022uF		25V
C734	1-126-012-11	ELECT	470uF	20%	16V
C735	1-161-494-00	CERAMIC	0.022uF		25V
C741	1-126-012-11	ELECT	470uF	20%	16V
C742	1-161-494-00	CERAMIC	0.022uF		25V
C781	1-126-044-11	ELECT	1uF	20%	50V
C791	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN08	1-568-272-11	SOCKET, CONNECTOR 6P			
* CN101	1-779-767-11	PIN, CONNECTOR			
* CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN202	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
* CN203	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN205	1-568-274-11	SOCKET, CONNECTOR 8P			
* CN301	1-770-334-11	PIN, CONNECTOR (PC BOARD) 17P			
* CN701	1-564-508-11	PLUG, CONNECTOR 5P (E,AR)			
* CN701	1-564-509-11	PLUG, CONNECTOR 6P (MX)			
		< DIODE >			
D201	8-719-987-63	DIODE 1N4148M			
D202	8-719-987-63	DIODE 1N4148M			
D203	8-719-987-63	DIODE 1N4148M			
D205	8-719-987-63	DIODE 1N4148M			
D208	8-719-987-63	DIODE 1N4148M			
D209	8-719-987-63	DIODE 1N4148M			
D211	8-719-987-63	DIODE 1N4148M			
D212	8-719-987-63	DIODE 1N4148M			
D213	8-719-987-63	DIODE 1N4148M			
D501	8-719-987-63	DIODE 1N4148M			
D551	8-719-987-63	DIODE 1N4148M			
D552	8-719-987-63	DIODE 1N4148M			
D553	8-719-987-63	DIODE 1N4148M			
D581	8-719-987-63	DIODE 1N4148M			
D582	8-719-987-63	DIODE 1N4148M			
D583	8-719-987-63	DIODE 1N4148M			
D584	8-719-987-63	DIODE 1N4148M			
D585	8-719-987-63	DIODE 1N4148M			
D701	8-719-510-33	DIODE D2SBA20			
D705	8-719-200-02	DIODE 10E2			
D706	8-719-200-02	DIODE 10E2			
D707	8-719-200-02	DIODE 10E2			
D708	8-719-200-02	DIODE 10E2			
D709	8-719-200-02	DIODE 10E2			
D711	8-719-110-31	DIODE RD12ES-B2			
D712	8-719-110-08	DIODE RD8.2ES-B2			
D713	8-719-109-93	DIODE RD6.2ESB2			
D714	8-719-110-31	DIODE RD12ES-B2			
D741	8-719-110-31	DIODE RD12ES-B2			
D781	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description	Remark
		< FUSE, FUSE HOLDER >	
⚠F701	1-532-388-31	FUSE (T2AL/250V)	
* F701H	1-533-213-31	HOLDER, FUSE (E,AR)	
* F701HA	1-533-213-31	HOLDER, FUSE (E,AR)	
		< IC >	
IC201	8-759-242-58	IC TA8189N	
IC301	8-759-634-51	IC M5218AP	
IC401	8-759-473-59	IC LC75392	
IC402	8-759-000-49	IC MC14066BCP	
IC403	8-759-505-55	IC NJM4558L	
IC501	8-749-013-85	IC STK405-070A	
IC502	8-759-111-68	IC uPC1237HA	
		< JACK >	
JK301	1-750-679-21	JACK, PIN 2P (PHONO)	
JK501	1-694-092-11	TERMINAL BOARD (SPEAKER)	
JK502	1-779-715-11	JACK (LARGE TYPE)(PHONES)	
		< COIL >	
L201	1-429-552-11	TRANSFORMER, BIAS OSCILLATION	
* L501	1-420-872-00	COIL, AIR CORE	
* L502	1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q1	8-729-194-57	TRANSISTOR 2SC945-P	
Q2	8-729-194-57	TRANSISTOR 2SC945-P	
Q201	8-729-194-57	TRANSISTOR 2SC945-P	
Q202	8-729-194-57	TRANSISTOR 2SC945-P	
Q203	8-729-194-57	TRANSISTOR 2SC945-P	
Q204	8-729-194-57	TRANSISTOR 2SC945-P	
Q205	8-729-194-57	TRANSISTOR 2SC945-P	
Q206	8-729-194-57	TRANSISTOR 2SC945-P	
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q208	8-729-194-57	TRANSISTOR 2SC945-P	
Q209	8-729-194-57	TRANSISTOR 2SC945-P	
Q210	8-729-194-57	TRANSISTOR 2SC945-P	
Q211	8-729-194-57	TRANSISTOR 2SC945-P	
Q212	8-729-194-57	TRANSISTOR 2SC945-P	
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q214	8-729-194-57	TRANSISTOR 2SC945-P	
Q216	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q217	8-729-194-57	TRANSISTOR 2SC945-P	
Q218	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q219	8-729-194-57	TRANSISTOR 2SC945-P	
Q220	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q451	8-729-194-57	TRANSISTOR 2SC945-P	
Q452	8-729-194-57	TRANSISTOR 2SC945-P	
Q461	8-729-194-57	TRANSISTOR 2SC945-P	
Q462	8-729-194-57	TRANSISTOR 2SC945-P	
Q463	8-729-194-57	TRANSISTOR 2SC945-P	
Q491	8-729-194-57	TRANSISTOR 2SC945-P	
Q492	8-729-194-57	TRANSISTOR 2SC945-P	
Q501	8-729-194-57	TRANSISTOR 2SC945-P	
Q502	8-729-194-57	TRANSISTOR 2SC945-P	
Q503	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q551	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
Q552	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q553	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q581	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q582	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q583	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q584	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q585	8-729-029-86	TRANSISTOR DTC124ESA	
Q586	8-729-029-86	TRANSISTOR DTC124ESA	
Q587	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q588	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q589	8-729-029-56	TRANSISTOR DTA144ESA	
Q701	8-729-188-23	TRANSISTOR 2SD882-P	
Q702	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q703	8-729-188-23	TRANSISTOR 2SD882-P	
Q704	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q705	8-729-188-23	TRANSISTOR 2SD882-P	
Q706	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q707	8-729-194-57	TRANSISTOR 2SC945-P	
Q751	8-729-194-57	TRANSISTOR 2SC945-P	
Q781	8-729-029-86	TRANSISTOR DTC124ESA	
Q782	8-729-029-86	TRANSISTOR DTC124ESA	

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R1	1-247-855-11	CARBON	10K	5%	1/4W
R2	1-247-855-11	CARBON	10K	5%	1/4W
R201	1-249-393-11	CARBON	10	5%	1/4W F
R202	1-249-393-11	CARBON	10	5%	1/4W F
R203	1-247-889-00	CARBON	270K	5%	1/4W
R204	1-247-889-00	CARBON	270K	5%	1/4W
R205	1-249-407-11	CARBON	150	5%	1/4W F
R206	1-249-407-11	CARBON	150	5%	1/4W F
R207	1-249-431-11	CARBON	15K	5%	1/4W
R208	1-249-431-11	CARBON	15K	5%	1/4W
R209	1-247-855-11	CARBON	10K	5%	1/4W
R210	1-247-863-11	CARBON	22K	5%	1/4W
R211	1-247-891-00	CARBON	330K	5%	1/4W
R212	1-247-891-00	CARBON	330K	5%	1/4W
R213	1-247-847-11	CARBON	4.7K	5%	1/4W
R214	1-247-847-11	CARBON	4.7K	5%	1/4W
R215	1-247-855-11	CARBON	10K	5%	1/4W
R216	1-249-431-11	CARBON	15K	5%	1/4W
R217	1-247-871-11	CARBON	47K	5%	1/4W
R218	1-247-704-11	CARBON	220	5%	1/4W F
R219	1-247-841-11	CARBON	2.7K	5%	1/4W
R220	1-249-434-11	CARBON	27K	5%	1/4W
R221	1-247-879-11	CARBON	100K	5%	1/4W
R222	1-247-879-11	CARBON	100K	5%	1/4W
R223	1-247-855-11	CARBON	10K	5%	1/4W
R224	1-247-855-11	CARBON	10K	5%	1/4W
R225	1-247-863-11	CARBON	22K	5%	1/4W
R226	1-247-863-11	CARBON	22K	5%	1/4W
R227	1-247-885-00	CARBON	180K	5%	1/4W
R228	1-247-885-00	CARBON	180K	5%	1/4W
R229	1-247-881-00	CARBON	120K	5%	1/4W
R230	1-247-881-00	CARBON	120K	5%	1/4W
R231	1-249-420-11	CARBON	1.8K	5%	1/4W F
R232	1-249-420-11	CARBON	1.8K	5%	1/4W F
R233	1-247-839-11	CARBON	2.2K	5%	1/4W
R234	1-247-839-11	CARBON	2.2K	5%	1/4W
R235	1-247-855-11	CARBON	10K	5%	1/4W
R236	1-247-855-11	CARBON	10K	5%	1/4W
R237	1-247-887-00	CARBON	220K	5%	1/4W
R238	1-247-843-11	CARBON	3.3K	5%	1/4W
R239	1-247-855-11	CARBON	10K	5%	1/4W
R240	1-249-393-11	CARBON	10	5%	1/4W F
R241	1-249-434-11	CARBON	27K	5%	1/4W
R242	1-247-708-11	CARBON	470	5%	1/4W F
R243	1-247-855-11	CARBON	10K	5%	1/4W
R244	1-247-855-11	CARBON	10K	5%	1/4W
R245	1-249-393-11	CARBON	10	5%	1/4W F
R246	1-249-393-11	CARBON	10	5%	1/4W F
R247	1-247-855-11	CARBON	10K	5%	1/4W
R248	1-249-434-11	CARBON	27K	5%	1/4W
R249	1-249-381-11	CARBON	1	5%	1/4W F
R250	1-247-847-11	CARBON	4.7K	5%	1/4W
R251	1-247-847-11	CARBON	4.7K	5%	1/4W
R252	1-247-847-11	CARBON	4.7K	5%	1/4W
R253	1-247-871-11	CARBON	47K	5%	1/4W
R256	1-247-871-11	CARBON	47K	5%	1/4W
R257	1-247-839-11	CARBON	2.2K	5%	1/4W
R258	1-247-871-11	CARBON	47K	5%	1/4W
R259	1-247-871-11	CARBON	47K	5%	1/4W
R260	1-247-855-11	CARBON	10K	5%	1/4W
R261	1-249-424-11	CARBON	3.9K	5%	1/4W F
R262	1-247-839-11	CARBON	2.2K	5%	1/4W
R263	1-249-417-11	CARBON	1K	5%	1/4W F
R264	1-247-839-11	CARBON	2.2K	5%	1/4W
R265	1-247-847-11	CARBON	4.7K	5%	1/4W
R266	1-249-417-11	CARBON	1K	5%	1/4W F
R267	1-247-839-11	CARBON	2.2K	5%	1/4W
R281	1-247-883-00	CARBON	150K	5%	1/4W
R282	1-247-883-00	CARBON	150K	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W F
R302	1-249-417-11	CARBON	1K	5%	1/4W F
R303	1-247-855-11	CARBON	10K	5%	1/4W
R304	1-247-855-11	CARBON	10K	5%	1/4W
R305	1-249-417-11	CARBON	1K	5%	1/4W F
R306	1-249-417-11	CARBON	1K	5%	1/4W F
R307	1-247-879-11	CARBON	100K	5%	1/4W
R308	1-247-879-11	CARBON	100K	5%	1/4W
R309	1-249-418-11	CARBON	1.2K	5%	1/4W F
R310	1-249-418-11	CARBON	1.2K	5%	1/4W F
R311	1-247-867-11	CARBON	33K	5%	1/4W
R312	1-247-867-11	CARBON	33K	5%	1/4W
R313	1-247-893-11	CARBON	390K	5%	1/4W
R314	1-247-893-11	CARBON	390K	5%	1/4W
R315	1-247-879-11	CARBON	100K	5%	1/4W
R316	1-247-879-11	CARBON	100K	5%	1/4W
R317	1-247-843-11	CARBON	3.3K	5%	1/4W
R318	1-247-843-11	CARBON	3.3K	5%	1/4W
R319	1-249-417-11	CARBON	1K	5%	1/4W F
R320	1-249-417-11	CARBON	1K	5%	1/4W F
R321	1-247-710-11	CARBON	560	5%	1/4W F
R323	1-247-704-11	CARBON	220	5%	1/4W F
R401	1-249-430-11	CARBON	12K	5%	1/4W
R402	1-249-430-11	CARBON	12K	5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark
R403	1-247-847-11	CARBON	4.7K	5%	1/4W
R404	1-247-847-11	CARBON	4.7K	5%	1/4W
R405	1-247-879-11	CARBON	100K	5%	1/4W
R406	1-247-879-11	CARBON	100K	5%	1/4W
R407	1-247-871-11	CARBON	47K	5%	1/4W
R408	1-247-871-11	CARBON	47K	5%	1/4W
R409	1-247-863-11	CARBON	22K	5%	1/4W
R410	1-247-863-11	CARBON	22K	5%	1/4W
R411	1-249-434-11	CARBON	27K	5%	1/4W
R412	1-249-434-11	CARBON	27K	5%	1/4W
R413	1-247-887-00	CARBON	220K	5%	1/4W
R414	1-247-887-00	CARBON	220K	5%	1/4W
R415	1-247-855-11	CARBON	10K	5%	1/4W
R416	1-247-855-11	CARBON	10K	5%	1/4W
R416	1-249-434-11	CARBON	27K	5%	1/4W
R417	1-249-434-11	CARBON	27K	5%	1/4W
R418	1-249-434-11	CARBON	27K	5%	1/4W
R419	1-247-867-11	CARBON	33K	5%	1/4W
R420	1-247-867-11	CARBON	33K	5%	1/4W
R421	1-247-843-11	CARBON	3.3K	5%	1/4W
R422	1-247-843-11	CARBON	3.3K	5%	1/4W
R423	1-249-430-11	CARBON	12K	5%	1/4W
R424	1-249-430-11	CARBON	12K	5%	1/4W
R425	1-247-867-11	CARBON	33K	5%	1/4W
R426	1-247-867-11	CARBON	33K	5%	1/4W
R427	1-247-871-11	CARBON	47K	5%	1/4W
R428	1-247-871-11	CARBON	47K	5%	1/4W
R429	1-247-871-11	CARBON	47K	5%	1/4W
R430	1-247-871-11	CARBON	47K	5%	1/4W
R431	1-247-871-11	CARBON	47K	5%	1/4W
R432	1-247-871-11	CARBON	47K	5%	1/4W
R433	1-247-871-11	CARBON	47K	5%	1/4W
R434	1-247-871-11	CARBON	47K	5%	1/4W
R435	1-247-839-11	CARBON	2.2K	5%	1/4W
R436	1-247-839-11	CARBON	2.2K	5%	1/4W
R437	1-247-839-11	CARBON	2.2K	5%	1/4W
R438	1-247-855-11	CARBON	10K	5%	1/4W
R439	1-247-855-11	CARBON	10K	5%	1/4W
R440	1-247-847-11	CARBON	4.7K	5%	1/4W
R441	1-247-704-11	CARBON	220	5%	1/4W F
R451	1-247-710-11	CARBON	560	5%	1/4W F
R453	1-247-903-00	CARBON	1M	5%	1/4W
R454	1-247-903-00	CARBON	1M	5%	1/4W
R455	1-247-839-11	CARBON	2.2K	5%	1/4W
R456	1-247-839-11	CARBON	2.2K	5%	1/4W
R457	1-247-847-11	CARBON	4.7K	5%	1/4W
R458	1-247-847-11	CARBON	4.7K	5%	1/4W
R459	1-247-723-11	CARBON	6.8K	5%	1/4W F
R460	1-247-723-11	CARBON	6.8K	5%	1/4W F
R461	1-247-704-11	CARBON	220	5%	1/4W F
R462	1-247-879-11	CARBON	100K	5%	1/4W
R463	1-247-871-11	CARBON	47K	5%	1/4W
R464	1-247-879-11	CARBON	100K	5%	1/4W
R465	1-247-871-11	CARBON	47K	5%	1/4W
R466	1-247-871-11	CARBON	47K	5%	1/4W
R467	1-247-843-11	CARBON	3.3K	5%	1/4W
R468	1-247-843-11	CARBON	3.3K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R469	1-247-839-11	CARBON	2.2K	5%	1/4W
R470	1-247-839-11	CARBON	2.2K	5%	1/4W
R471	1-247-871-11	CARBON	47K	5%	1/4W
R472	1-247-871-11	CARBON	47K	5%	1/4W
R473	1-247-835-11	CARBON	1.5K	5%	1/4W
R474	1-247-835-11	CARBON	1.5K	5%	1/4W
R475	1-247-855-11	CARBON	10K	5%	1/4W
R476	1-247-855-11	CARBON	10K	5%	1/4W
R477	1-247-839-11	CARBON	2.2K	5%	1/4W
R478	1-247-839-11	CARBON	2.2K	5%	1/4W
R479	1-247-704-11	CARBON	220	5%	1/4W F
R480	1-247-710-11	CARBON	560	5%	1/4W F
R493	1-247-903-00	CARBON	1M	5%	1/4W
R494	1-247-903-00	CARBON	1M	5%	1/4W
R495	1-247-847-11	CARBON	4.7K	5%	1/4W
R496	1-247-847-11	CARBON	4.7K	5%	1/4W
R497	1-247-708-11	CARBON	470	5%	1/4W F
R499	1-247-855-11	CARBON	10K	5%	1/4W
R500	1-247-807-11	CARBON	100	5%	1/4W
R501	1-249-438-11	CARBON	56K	5%	1/4W
R502	1-249-466-11	CARBON	56K	5%	1/4W
R503	1-247-841-11	CARBON	2.7K	5%	1/4W
R504	1-247-841-11	CARBON	2.7K	5%	1/4W
R505	1-249-438-11	CARBON	56K	5%	1/4W
R506	1-249-438-11	CARBON	56K	5%	1/4W
R507	1-249-482-11	CARBON	4.7	5%	1/2W
R508	1-249-482-11	CARBON	4.7	5%	1/2W
R509	1-249-405-11	CARBON	100	5%	1/4W F
R510	1-247-855-11	CARBON	10K	5%	1/4W
R511	1-247-855-11	CARBON	10K	5%	1/4W
R512	1-247-855-11	CARBON	10K	5%	1/4W
R513	1-249-431-11	CARBON	15K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W F
R515	1-249-417-11	CARBON	1K	5%	1/4W F
R521	1-249-482-11	CARBON	4.7	5%	1/2W
R522	1-249-482-11	CARBON	4.7	5%	1/2W
R523	1-247-727-11	CARBON	10	5%	1/2W
R524	1-247-727-11	CARBON	10	5%	1/2W
⚠R525	1-216-429-11	METAL OXIDE	270	5%	1W F
⚠R526	1-216-429-11	METAL OXIDE	270	5%	1W F
R527	1-247-737-11	CARBON	68	5%	1/2W F
R528	1-247-737-11	CARBON	68	5%	1/2W F
⚠R551	1-208-601-11	WIREWOUND	0.1	10%	2W F
⚠R552	1-208-601-11	WIREWOUND	0.1	10%	2W F
R553	1-247-879-11	CARBON	100K	5%	1/4W
R554	1-247-879-11	CARBON	100K	5%	1/4W
R555	1-247-839-11	CARBON	2.2K	5%	1/4W
R556	1-247-839-11	CARBON	2.2K	5%	1/4W
R557	1-249-431-11	CARBON	15K	5%	1/4W
R558	1-249-431-11	CARBON	15K	5%	1/4W
R559	1-247-839-11	CARBON	2.2K	5%	1/4W
R560	1-249-430-11	CARBON	12K	5%	1/4W
R561	1-249-430-11	CARBON	12K	5%	1/4W
R562	1-247-871-11	CARBON	47K	5%	1/4W
R563	1-247-855-11	CARBON	10K	5%	1/4W
R564	1-247-879-11	CARBON	100K	5%	1/4W
R565	1-247-847-11	CARBON	4.7K	5%	1/4W
R566	1-247-713-11	CARBON	1K	5%	1/4W F

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Ref. No.	Part No.	Description				Remark
R567	1-249-438-11	CARBON	56K	5%	1/4W	
R581	1-247-843-11	CARBON	3.3K	5%	1/4W	
R582	1-247-843-11	CARBON	3.3K	5%	1/4W	
R583	1-249-439-11	CARBON	68K	5%	1/4W	
R584	1-247-847-11	CARBON	4.7K	5%	1/4W	
R585	1-247-839-11	CARBON	2.2K	5%	1/4W	
R586	1-249-431-11	CARBON	15K	5%	1/4W	
R587	1-249-432-11	CARBON	18K	5%	1/4W	
R588	1-249-438-11	CARBON	56K	5%	1/4W	
R589	1-249-434-11	CARBON	27K	5%	1/4W	
R590	1-249-431-11	CARBON	15K	5%	1/4W	
R591	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R592	1-247-879-11	CARBON	100K	5%	1/4W	
R593	1-247-843-11	CARBON	3.3K	5%	1/4W	
R594	1-247-843-11	CARBON	3.3K	5%	1/4W	
R595	1-247-879-11	CARBON	100K	5%	1/4W	
⚠R701	1-216-349-00	METAL OXIDE	1	5%	1W	F
R702	1-247-706-11	CARBON	330	5%	1/4W	F
R703	1-247-713-11	CARBON	1K	5%	1/4W	F
R704	1-247-708-11	CARBON	470	5%	1/4W	F
R705	1-247-706-11	CARBON	330	5%	1/4W	F
⚠R706	1-216-349-00	METAL OXIDE	1	5%	1W	F
R707	1-247-711-11	CARBON	680	5%	1/4W	F
R708	1-247-855-11	CARBON	10K	5%	1/4W	
R709	1-247-855-11	CARBON	10K	5%	1/4W	
R710	1-249-427-11	CARBON	6.8K	5%	1/4W	F
⚠R741	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R751	1-247-855-11	CARBON	10K	5%	1/4W	
R752	1-247-867-11	CARBON	33K	5%	1/4W	
R781	1-247-855-11	CARBON	10K	5%	1/4W	
R782	1-247-855-11	CARBON	10K	5%	1/4W	
		< RELAY >				
RL501	1-515-921-11	RELAY (12V)				
		< VARIABLE RESISTOR >				
SFR201	1-228-994-00	RES, ADJ, METAL 10K				
		< SWITCH >				
SW751	1-762-735-11	SWITCH, SLIDE (AM TUNING STEP)(E,AR)				

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*	A-4403-155-A	MAIN BOARD, COMPLETE (AEP,UK)				
		**********				
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT				
		< CAPACITOR >				
C201	1-162-286-31	CERAMIC	220PF	10%	50V	
C202	1-162-286-31	CERAMIC	220PF	10%	50V	
C203	1-162-292-31	CERAMIC	680PF	10%	50V	
C204	1-162-292-31	CERAMIC	680PF	10%	50V	
C205	1-162-286-31	CERAMIC	220PF	10%	50V	
C206	1-162-286-31	CERAMIC	220PF	10%	50V	
C207	1-124-907-11	ELECT	10uF	20%	50V	
C208	1-124-907-11	ELECT	10uF	20%	50V	
C209	1-130-485-00	MYLAR	0.015uF	5%	50V	
C210	1-130-485-00	MYLAR	0.015uF	5%	50V	
C211	1-124-903-11	ELECT	1uF	20%	50V	
C212	1-124-903-11	ELECT	1uF	20%	50V	
C213	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C214	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C215	1-164-086-11	CERAMIC	0.0012uF	20%	50V	
C216	1-164-086-11	CERAMIC	0.0012uF	20%	50V	
C217	1-162-286-31	CERAMIC	220PF	10%	50V	
C218	1-162-286-31	CERAMIC	220PF	10%	50V	
C219	1-126-962-11	ELECT	3.3uF	20%	50V	
C220	1-126-962-11	ELECT	3.3uF	20%	50V	
C221	1-104-665-11	ELECT	100uF	20%	16V	
C222	1-104-665-11	ELECT	100uF	20%	16V	
C223	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C224	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C225	1-126-962-11	ELECT	3.3uF	20%	50V	
C226	1-126-962-11	ELECT	3.3uF	20%	50V	
C228	1-124-907-11	ELECT	10uF	20%	50V	
C230	1-130-485-00	MYLAR	0.015uF	5%	50V	
C231	1-130-483-00	MYLAR	0.01uF	5%	50V	
C232	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C233	1-130-487-00	MYLAR	0.022uF	5%	50V	
C234	1-104-664-11	ELECT	47uF	20%	25V	
C235	1-161-494-00	CERAMIC	0.022uF		25V	
C237	1-124-119-00	ELECT	330uF	20%	16V	
C238	1-126-962-11	ELECT	3.3uF	20%	50V	
C239	1-162-292-31	CERAMIC	680PF	10%	50V	
C240	1-162-292-31	CERAMIC	680PF	10%	50V	
C241	1-104-665-11	ELECT	100uF	20%	16V	
C242	1-126-959-11	ELECT	0.47uF	20%	50V	
C243	1-126-961-11	ELECT	2.2uF	20%	50V	
C301	1-130-495-11	MYLAR	0.1uF	5%	50V	
C302	1-130-495-11	MYLAR	0.1uF	5%	50V	
C303	1-130-495-11	MYLAR	0.1uF	5%	50V	
C304	1-130-495-11	MYLAR	0.1uF	5%	50V	
C305	1-126-972-11	ELECT	1000uF	20%	50V	
C306	1-126-972-11	ELECT	1000uF	20%	50V	
C307	1-104-664-11	ELECT	47uF	20%	25V	
C308	1-104-664-11	ELECT	47uF	20%	25V	
C309	1-104-666-11	ELECT	220uF	20%	16V	
C310	1-104-666-11	ELECT	220uF	20%	16V	
C311	1-124-572-11	ELECT	100uF	20%	63V	
C312	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C314	1-124-903-11	ELECT	1uF	20%	50V	
C315	1-124-903-11	ELECT	1uF	20%	50V	
C316	1-104-664-11	ELECT	47uF	20%	25V	
C317	1-124-572-11	ELECT	100uF	20%	63V	
C318	1-162-290-31	CERAMIC	470PF	10%	50V	
C319	1-162-290-31	CERAMIC	470PF	10%	50V	
C320	1-124-903-11	ELECT	1uF	20%	50V	
C321	1-124-903-11	ELECT	1uF	20%	50V	
C322	1-124-907-11	ELECT	10uF	20%	50V	
C323	1-124-907-11	ELECT	10uF	20%	50V	
C324	1-124-907-11	ELECT	10uF	20%	50V	
C325	1-164-159-11	CERAMIC	0.1uF		50V	
C326	1-164-159-11	CERAMIC	0.1uF		50V	

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MAIN

Ref. No.	Part No.	Description			Remark
C327	1-124-907-11	ELECT	10uF	20%	50V
C328	1-124-480-11	ELECT	470uF	20%	25V
C329	1-124-907-11	ELECT	10uF	20%	50V
C330	1-124-907-11	ELECT	10uF	20%	50V
C331	1-126-959-11	ELECT	0.47uF	20%	50V
C332	1-126-959-11	ELECT	0.47uF	20%	50V
C333	1-104-665-11	ELECT	100uF	20%	16V
C334	1-126-959-11	ELECT	0.47uF	20%	50V
C335	1-126-959-11	ELECT	0.47uF	20%	50V
C338	1-162-215-31	CERAMIC	47PF	5%	50V
C339	1-162-215-31	CERAMIC	47PF	5%	50V
C340	1-162-282-31	CERAMIC	100PF	10%	50V
C341	1-162-282-31	CERAMIC	100PF	10%	50V
C342	1-104-665-11	ELECT	100uF	20%	16V
C343	1-162-199-31	CERAMIC	10PF	5%	50V
C344	1-162-199-31	CERAMIC	10PF	5%	50V
C345	1-104-666-11	ELECT	220uF	20%	16V
C348	1-104-666-11	ELECT	220uF	20%	16V
C349	1-162-290-31	CERAMIC	470PF	10%	50V
C350	1-162-290-31	CERAMIC	470PF	10%	50V
C351	1-126-963-11	ELECT	4.7uF	20%	50V
C352	1-126-963-11	ELECT	4.7uF	20%	50V
C353	1-126-959-11	ELECT	0.47uF	20%	50V
C354	1-126-959-11	ELECT	0.47uF	20%	50V
C355	1-126-959-11	ELECT	0.47uF	20%	50V
C356	1-126-959-11	ELECT	0.47uF	20%	50V
C357	1-104-666-11	ELECT	220uF	20%	16V
C359	1-126-961-11	ELECT	2.2uF	20%	50V
C360	1-117-750-11	ELECT	3300uF	20%	63V
C361	1-137-150-00	MYLAR	0.01uF	5%	100V
C362	1-137-150-00	MYLAR	0.01uF	5%	100V
C363	1-162-290-31	CERAMIC	470PF	10%	50V
C364	1-162-290-31	CERAMIC	470PF	10%	50V
C365	1-130-485-00	MYLAR	0.015uF	5%	50V
C366	1-130-485-00	MYLAR	0.015uF	5%	50V
C367	1-162-292-31	CERAMIC	680PF	10%	50V
C368	1-162-292-31	CERAMIC	680PF	10%	50V
C369	1-161-494-00	CERAMIC	0.022uF		25V
C370	1-161-494-00	CERAMIC	0.022uF		25V
C371	1-124-636-00	ELECT	3300uF	20%	25V
C372	1-104-665-11	ELECT	100uF	20%	16V
C373	1-161-494-00	CERAMIC	0.022uF		25V
C374	1-161-494-00	CERAMIC	0.022uF		25V
C375	1-161-494-00	CERAMIC	0.022uF		25V
C376	1-126-941-11	ELECT	470uF	20%	16V
C377	1-161-494-00	CERAMIC	0.022uF		25V
C378	1-161-494-00	CERAMIC	0.022uF		25V
C379	1-104-665-11	ELECT	100uF	20%	16V
C380	1-161-494-00	CERAMIC	0.022uF		25V
C381	1-126-941-11	ELECT	470uF	20%	16V
C382	1-124-480-11	ELECT	470uF	20%	25V
C383	1-161-494-00	CERAMIC	0.022uF		25V
C384	1-161-494-00	CERAMIC	0.022uF		25V
C385	1-126-941-11	ELECT	470uF	20%	16V
C386	1-161-494-00	CERAMIC	0.022uF		25V
C387	1-126-941-11	ELECT	470uF	20%	16V
C388	1-162-284-31	CERAMIC	150PF	10%	50V
C389	1-162-284-31	CERAMIC	150PF	10%	50V
C390	1-130-486-00	MYLAR	0.018uF	10%	50V
C391	1-130-486-00	MYLAR	0.018uF	10%	50V
C393	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C394	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C395	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C396	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C397	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C398	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C399	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C400	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C402	1-130-471-00	MYLAR	0.001uF	5%	50V
C403	1-162-288-31	CERAMIC	330PF	10%	50V
C404	1-162-288-31	CERAMIC	330PF	10%	50V
C405	1-104-664-11	ELECT	47uF	20%	25V
C406	1-104-665-11	ELECT	100uF	20%	16V
C407	1-162-290-31	CERAMIC	470PF	10%	50V
C408	1-162-290-31	CERAMIC	470PF	10%	50V
C409	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C410	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C411	1-162-294-31	CERAMIC	0.001uF	10%	50V
C412	1-162-294-31	CERAMIC	0.001uF	10%	50V
C413	1-162-286-31	CERAMIC	220PF	10%	50V
C414	1-130-482-00	MYLAR	0.0082uF	5%	50V
C415	1-130-482-00	MYLAR	0.0082uF	5%	50V
C416	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C417	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C419	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C420	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C421	1-124-907-11	ELECT	10uF	20%	50V
C422	1-124-907-11	ELECT	10uF	20%	50V
C424	1-126-963-11	ELECT	4.7uF	20%	50V
C425	1-126-963-11	ELECT	4.7uF	20%	50V
C426	1-162-290-31	CERAMIC	470PF	10%	50V
C427	1-162-290-31	CERAMIC	470PF	10%	50V
C428	1-162-282-31	CERAMIC	100PF	10%	50V
C429	1-162-282-31	CERAMIC	100PF	10%	50V
C430	1-126-959-11	ELECT	0.47uF	20%	50V
C431	1-126-959-11	ELECT	0.47uF	20%	50V
C432	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C433	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C434	1-164-159-11	CERAMIC	0.1uF		50V
C435	1-162-292-31	CERAMIC	680PF	10%	50V
C436	1-162-292-31	CERAMIC	680PF	10%	50V
C437	1-104-665-11	ELECT	100uF	20%	16V
C438	1-104-666-11	ELECT	220uF	20%	16V
C439	1-104-665-11	ELECT	100uF	20%	16V
C442	1-104-665-11	ELECT	100uF	20%	16V
C443	1-104-665-11	ELECT	100uF	20%	16V
C444	1-104-665-11	ELECT	100uF	20%	16V
C445	1-161-494-00	CERAMIC	0.022uF		25V
C446	1-161-494-00	CERAMIC	0.022uF		25V
C447	1-161-494-00	CERAMIC	0.022uF		25V
C448	1-126-959-11	ELECT	0.47uF	20%	50V
C449	1-126-959-11	ELECT	0.47uF	20%	50V
C450	1-126-959-11	ELECT	0.47uF	20%	50V
C451	1-126-959-11	ELECT	0.47uF	20%	50V
C452	1-124-907-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN08	1-568-272-11	SOCKET, CONNECTOR 6P	
* CN101	1-779-767-11	PIN, CONNECTOR	
* CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CN202	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
* CN203	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN205	1-568-274-11	SOCKET, CONNECTOR 8P	
* CN301	1-770-334-11	PIN, CONNECTOR (PC BOARD) 17P	
* CN401	1-564-507-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D201	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-987-63	DIODE 1N4148M	
D205	8-719-987-63	DIODE 1N4148M	
D208	8-719-987-63	DIODE 1N4148M	
D209	8-719-987-63	DIODE 1N4148M	
D211	8-719-987-63	DIODE 1N4148M	
D212	8-719-987-63	DIODE 1N4148M	
D213	8-719-987-63	DIODE 1N4148M	
D301	8-719-109-93	DIODE RD6.2ESB2	
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-987-63	DIODE 1N4148M	
D306	8-719-510-33	DIODE D2SBA20	
D310	8-719-904-02	DIODE 1N4002T	
D311	8-719-904-02	DIODE 1N4002T	
D312	8-719-904-02	DIODE 1N4002T	
D313	8-719-904-02	DIODE 1N4002T	
D314	8-719-110-08	DIODE RD8.2ES-B2	
D315	8-719-110-31	DIODE RD12ES-B2	
D316	8-719-110-31	DIODE RD12ES-B2	
D318	8-719-987-63	DIODE 1N4148M	
D319	8-719-987-63	DIODE 1N4148M	
D321	8-719-987-63	DIODE 1N4148M	
D322	8-719-987-63	DIODE 1N4148M	
D401	8-719-987-63	DIODE 1N4148M	
		< FUSE, FUSE HOLDER >	
⚠F301	1-532-504-31	FUSE (T4AL/250V)	
* F301HA	1-533-213-31	HOLDER, FUSE	
* F301HB	1-533-213-31	HOLDER, FUSE	
⚠F302	1-532-388-31	FUSE (T2AL/250V)	
* F302HA	1-533-213-31	HOLDER, FUSE	
* F302HB	1-533-213-31	HOLDER, FUSE	
		< IC >	
IC201	8-759-242-58	IC TA8189N	
IC301	8-749-920-14	IC STK-4412	
IC302	8-759-000-49	IC MC14066BCP	
IC303	8-759-473-59	IC LC75392	
IC304	8-759-634-51	IC M5218AP	
		< JACK >	
JK301	1-694-092-11	TERMINAL BOARD (SPEAKER)	
JK302	1-779-715-11	JACK (LARGE TYPE)(PHONES)	
JK502	1-750-679-21	JACK, PIN 2P (PHONO)	

Ref. No.	Part No.	Description	Remark
		< COIL >	
L201	1-429-552-11	TRANSFORMER, BIAS OSCILLATION	
L301	1-420-872-00	COIL, AIR	
L302	1-420-872-00	COIL, AIR	
		< TRANSISTOR >	
Q201	8-729-194-57	TRANSISTOR 2SC945-P	
Q202	8-729-194-57	TRANSISTOR 2SC945-P	
Q203	8-729-194-57	TRANSISTOR 2SC945-P	
Q204	8-729-194-57	TRANSISTOR 2SC945-P	
Q205	8-729-194-57	TRANSISTOR 2SC945-P	
Q206	8-729-194-57	TRANSISTOR 2SC945-P	
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q208	8-729-194-57	TRANSISTOR 2SC945-P	
Q209	8-729-194-57	TRANSISTOR 2SC945-P	
Q210	8-729-194-57	TRANSISTOR 2SC945-P	
Q211	8-729-194-57	TRANSISTOR 2SC945-P	
Q212	8-729-194-57	TRANSISTOR 2SC945-P	
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q214	8-729-194-57	TRANSISTOR 2SC945-P	
Q216	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q217	8-729-194-57	TRANSISTOR 2SC945-P	
Q218	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q219	8-729-194-57	TRANSISTOR 2SC945-P	
Q220	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q301	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q302	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q303	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q305	8-729-194-57	TRANSISTOR 2SC945-P	
Q306	8-729-194-57	TRANSISTOR 2SC945-P	
Q307	8-729-194-57	TRANSISTOR 2SC945-P	
Q308	8-729-194-57	TRANSISTOR 2SC945-P	
Q309	8-729-194-57	TRANSISTOR 2SC945-P	
Q311	8-729-194-57	TRANSISTOR 2SC945-P	
Q312	8-729-194-57	TRANSISTOR 2SC945-P	
Q313	8-729-194-57	TRANSISTOR 2SC945-P	
Q315	8-729-188-23	TRANSISTOR 2SD882-P	
Q316	8-729-188-23	TRANSISTOR 2SD882-P	
Q317	8-729-188-23	TRANSISTOR 2SD882-P	
Q319	8-729-194-57	TRANSISTOR 2SC945-P	
Q320	8-729-194-57	TRANSISTOR 2SC945-P	
Q321	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q401	8-729-194-57	TRANSISTOR 2SC945-P	
Q402	8-729-194-57	TRANSISTOR 2SC945-P	
		< RESISTOR >	

R201	1-249-393-11	CARBON	10	5%	1/4W	F
R202	1-249-393-11	CARBON	10	5%	1/4W	F
R203	1-247-889-00	CARBON	270K	5%	1/4W	
R204	1-247-889-00	CARBON	270K	5%	1/4W	
R205	1-249-407-11	CARBON	150	5%	1/4W	F
R205A	1-247-827-11	CARBON	680	5%	1/4W	
R206	1-249-407-11	CARBON	150	5%	1/4W	F
R206A	1-247-827-11	CARBON	680	5%	1/4W	
R207	1-249-431-11	CARBON	15K	5%	1/4W	
R208	1-249-431-11	CARBON	15K	5%	1/4W	
R209	1-247-855-11	CARBON	10K	5%	1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description			Remark
R210	1-247-863-11	CARBON	22K	5%	1/4W
R211	1-247-891-00	CARBON	330K	5%	1/4W
R212	1-247-891-00	CARBON	330K	5%	1/4W
R213	1-247-847-11	CARBON	4.7K	5%	1/4W
R214	1-247-847-11	CARBON	4.7K	5%	1/4W
R215	1-247-855-11	CARBON	10K	5%	1/4W
R216	1-249-431-11	CARBON	15K	5%	1/4W
R217	1-249-465-11	CARBON	47K	5%	1/4W
R218	1-247-704-11	CARBON	220	5%	1/4W F
R219	1-247-841-11	CARBON	2.7K	5%	1/4W
R220	1-249-434-11	CARBON	27K	5%	1/4W
R221	1-247-879-11	CARBON	100K	5%	1/4W
R222	1-247-879-11	CARBON	100K	5%	1/4W
R223	1-247-855-11	CARBON	10K	5%	1/4W
R224	1-247-855-11	CARBON	10K	5%	1/4W
R225	1-247-863-11	CARBON	22K	5%	1/4W
R226	1-247-863-11	CARBON	22K	5%	1/4W
R227	1-247-885-00	CARBON	180K	5%	1/4W
R228	1-247-885-00	CARBON	180K	5%	1/4W
R229	1-247-881-11	CARBON	120K	5%	1/4W
R230	1-247-881-11	CARBON	120K	5%	1/4W
R231	1-249-420-11	CARBON	1.8K	5%	1/4W F
R232	1-249-420-11	CARBON	1.8K	5%	1/4W F
R233	1-247-839-11	CARBON	2.2K	5%	1/4W
R234	1-247-839-11	CARBON	2.2K	5%	1/4W
R235	1-247-855-11	CARBON	10K	5%	1/4W
R236	1-247-855-11	CARBON	10K	5%	1/4W
R237	1-247-887-00	CARBON	220K	5%	1/4W
R238	1-247-843-11	CARBON	3.3K	5%	1/4W
R239	1-247-855-11	CARBON	10K	5%	1/4W
R240	1-249-393-11	CARBON	10	5%	1/4W F
R241	1-249-434-11	CARBON	27K	5%	1/4W
R242	1-247-708-11	CARBON	470	5%	1/4W F
R243	1-247-855-11	CARBON	10K	5%	1/4W
R244	1-247-855-11	CARBON	10K	5%	1/4W
R245	1-249-393-11	CARBON	10	5%	1/4W F
R246	1-249-393-11	CARBON	10	5%	1/4W F
R247	1-247-855-11	CARBON	10K	5%	1/4W
R248	1-249-434-11	CARBON	27K	5%	1/4W
R249	1-249-381-11	CARBON	1	5%	1/4W F
R250	1-247-847-11	CARBON	4.7K	5%	1/4W
R251	1-247-847-11	CARBON	4.7K	5%	1/4W
R252	1-247-871-11	CARBON	47K	5%	1/4W
R253	1-247-871-11	CARBON	47K	5%	1/4W
R256	1-247-871-11	CARBON	47K	5%	1/4W
R257	1-247-839-11	CARBON	2.2K	5%	1/4W
R258	1-247-871-11	CARBON	47K	5%	1/4W
R259	1-247-871-11	CARBON	47K	5%	1/4W
R260	1-247-855-11	CARBON	10K	5%	1/4W
R261	1-249-424-11	CARBON	3.9K	5%	1/4W F
R262	1-247-839-11	CARBON	2.2K	5%	1/4W
R263	1-249-417-11	CARBON	1K	5%	1/4W F
R264	1-247-839-11	CARBON	2.2K	5%	1/4W
R265	1-247-847-11	CARBON	4.7K	5%	1/4W
R266	1-249-417-11	CARBON	1K	5%	1/4W F
R267	1-247-839-11	CARBON	2.2K	5%	1/4W
R301	1-260-072-11	CARBON	4.7	5%	1/2W
R302	1-260-072-11	CARBON	4.7	5%	1/2W

Ref. No.	Part No.	Description			Remark
⚠R303	1-212-879-11	FUSIBLE	82	5%	1/4W F
⚠R304	1-212-879-11	FUSIBLE	82	5%	1/4W F
R305	1-249-459-11	CARBON	12K	5%	1/4W
R306	1-249-459-11	CARBON	12K	5%	1/4W
R307	1-260-087-11	CARBON	100	5%	1/2W
R308	1-247-879-11	CARBON	100K	5%	1/4W
R309	1-247-879-11	CARBON	100K	5%	1/4W
R310	1-247-879-11	CARBON	100K	5%	1/4W
R311	1-247-889-00	CARBON	270K	5%	1/4W
R312	1-247-879-11	CARBON	100K	5%	1/4W
R313	1-247-879-11	CARBON	100K	5%	1/4W
R314	1-247-879-11	CARBON	100K	5%	1/4W
R315	1-247-879-11	CARBON	100K	5%	1/4W
R316	1-247-879-11	CARBON	100K	5%	1/4W
R317	1-247-879-11	CARBON	100K	5%	1/4W
R318	1-247-847-11	CARBON	4.7K	5%	1/4W
R319	1-247-847-11	CARBON	4.7K	5%	1/4W
R320	1-247-863-11	CARBON	22K	5%	1/4W
R321	1-247-839-11	CARBON	2.2K	5%	1/4W
R322	1-247-839-11	CARBON	2.2K	5%	1/4W
R323	1-247-713-11	CARBON	1K	5%	1/4W F
R324	1-247-713-11	CARBON	1K	5%	1/4W F
R325	1-247-871-11	CARBON	47K	5%	1/4W
R326	1-247-871-11	CARBON	47K	5%	1/4W
R327	1-249-424-11	CARBON	3.9K	5%	1/4W F
R328	1-249-424-11	CARBON	3.9K	5%	1/4W F
R329	1-249-427-11	CARBON	6.8K	5%	1/4W F
R330	1-249-427-11	CARBON	6.8K	5%	1/4W F
R331	1-249-417-11	CARBON	1K	5%	1/4W F
R332	1-249-417-11	CARBON	1K	5%	1/4W F
R333	1-247-903-00	CARBON	1M	5%	1/4W
R334	1-247-903-00	CARBON	1M	5%	1/4W
R335	1-247-708-11	CARBON	470	5%	1/4W F
R336	1-247-879-11	CARBON	100K	5%	1/4W
R337	1-247-855-11	CARBON	10K	5%	1/4W
R338	1-247-879-11	CARBON	100K	5%	1/4W
R339	1-247-839-11	CARBON	2.2K	5%	1/4W
R340	1-247-717-11	CARBON	2.2K	5%	1/4W F
R341	1-247-847-11	CARBON	4.7K	5%	1/4W
R342	1-247-847-11	CARBON	4.7K	5%	1/4W
R343	1-247-903-00	CARBON	1M	5%	1/4W
R344	1-247-903-00	CARBON	1M	5%	1/4W
R347	1-247-855-11	CARBON	10K	5%	1/4W
R348	1-247-847-11	CARBON	4.7K	5%	1/4W
R350	1-247-839-11	CARBON	2.2K	5%	1/4W
R351	1-247-839-11	CARBON	2.2K	5%	1/4W
R352	1-247-839-11	CARBON	2.2K	5%	1/4W
R353	1-247-704-11	CARBON	220	5%	1/4W F
R355	1-247-708-11	CARBON	470	5%	1/4W F
R356	1-247-867-11	CARBON	33K	5%	1/4W
R357	1-247-867-11	CARBON	33K	5%	1/4W
R358	1-247-879-11	CARBON	100K	5%	1/4W
R359	1-247-879-11	CARBON	100K	5%	1/4W
R360	1-249-440-11	CARBON	82K	5%	1/4W
R361	1-249-440-11	CARBON	82K	5%	1/4W
R362	1-247-847-11	CARBON	4.7K	5%	1/4W
R363	1-247-847-11	CARBON	4.7K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R364	1-247-883-00	CARBON	150K	5%	1/4W
R365	1-247-883-00	CARBON	150K	5%	1/4W
R366	1-247-863-11	CARBON	22K	5%	1/4W
R367	1-247-863-11	CARBON	22K	5%	1/4W
R368	1-247-871-11	CARBON	47K	5%	1/4W
R369	1-247-871-11	CARBON	47K	5%	1/4W
R370	1-247-887-00	CARBON	220K	5%	1/4W
R371	1-247-887-00	CARBON	220K	5%	1/4W
R372	1-249-417-11	CARBON	1K	5%	1/4W F
R373	1-247-843-11	CARBON	3.3K	5%	1/4W
R374	1-247-721-11	CARBON	4.7K	5%	1/4W F
R375	1-247-855-11	CARBON	10K	5%	1/4W
R376	1-249-430-11	CARBON	12K	5%	1/4W
R377	1-247-855-11	CARBON	10K	5%	1/4W
R378	1-247-855-11	CARBON	10K	5%	1/4W
R379	1-247-855-11	CARBON	10K	5%	1/4W
R380	1-247-855-11	CARBON	10K	5%	1/4W
⚠R381	1-208-601-11	WIREWOUND	0.1	10%	2W F
R382	1-246-461-15	CARBON	330	5%	1/4W
R383	1-247-708-11	CARBON	470	5%	1/4W F
R384	1-247-711-11	CARBON	680	5%	1/4W F
R385	1-249-417-11	CARBON	1K	5%	1/4W F
R386	1-260-094-11	CARBON	390	5%	1/2W
R387	1-260-094-11	CARBON	390	5%	1/2W
R388	1-249-431-11	CARBON	15K	5%	1/4W
⚠R389	1-208-601-11	WIREWOUND	0.1	10%	2W F
R390	1-247-708-11	CARBON	470	5%	1/4W F
R391	1-249-434-11	CARBON	27K	5%	1/4W
R392	1-249-434-11	CARBON	27K	5%	1/4W
R393	1-249-430-11	CARBON	12K	5%	1/4W
R394	1-249-430-11	CARBON	12K	5%	1/4W
R395	1-247-843-11	CARBON	3.3K	5%	1/4W
R396	1-247-719-11	CARBON	3.3K	5%	1/4W F
R397	1-249-434-11	CARBON	27K	5%	1/4W
R398	1-249-434-11	CARBON	27K	5%	1/4W
R399	1-247-867-11	CARBON	33K	5%	1/4W
R400	1-247-867-11	CARBON	33K	5%	1/4W
R401	1-249-427-11	CARBON	6.8K	5%	1/4W F
R402	1-249-427-11	CARBON	6.8K	5%	1/4W F
R403	1-249-430-11	CARBON	12K	5%	1/4W
R404	1-249-430-11	CARBON	12K	5%	1/4W
R405	1-249-417-11	CARBON	1K	5%	1/4W F
R406	1-249-417-11	CARBON	1K	5%	1/4W F
R407	1-247-843-11	CARBON	3.3K	5%	1/4W
R408	1-247-843-11	CARBON	3.3K	5%	1/4W
R409	1-247-879-11	CARBON	100K	5%	1/4W
R410	1-247-879-11	CARBON	100K	5%	1/4W
R412	1-247-855-11	CARBON	10K	5%	1/4W
R413	1-247-855-11	CARBON	10K	5%	1/4W
R414	1-247-893-11	CARBON	390K	5%	1/4W
R415	1-247-893-11	CARBON	390K	5%	1/4W
R416	1-247-867-11	CARBON	33K	5%	1/4W
R417	1-247-867-11	CARBON	33K	5%	1/4W
R418	1-249-418-11	CARBON	1.2K	5%	1/4W F
R419	1-249-418-11	CARBON	1.2K	5%	1/4W F
R420	1-247-879-11	CARBON	100K	5%	1/4W
R421	1-247-879-11	CARBON	100K	5%	1/4W
R422	1-247-855-11	CARBON	10K	5%	1/4W
R423	1-247-855-11	CARBON	10K	5%	1/4W
R424	1-249-417-11	CARBON	1K	5%	1/4W F
R425	1-249-417-11	CARBON	1K	5%	1/4W F
R426	1-249-417-11	CARBON	1K	5%	1/4W F
R427	1-249-417-11	CARBON	1K	5%	1/4W F
R430	1-247-867-11	CARBON	33K	5%	1/4W
R432	1-247-855-11	CARBON	10K	5%	1/4W
R433	1-247-871-11	CARBON	47K	5%	1/4W
R434	1-247-855-11	CARBON	10K	5%	1/4W
R435	1-246-461-15	CARBON	330	5%	1/4W
R436	1-247-871-11	CARBON	47K	5%	1/4W
R437	1-247-871-11	CARBON	47K	5%	1/4W
R438	1-247-871-11	CARBON	47K	5%	1/4W
R439	1-247-871-11	CARBON	47K	5%	1/4W
R440	1-247-871-11	CARBON	47K	5%	1/4W
R441	1-247-871-11	CARBON	47K	5%	1/4W
R442	1-247-871-11	CARBON	47K	5%	1/4W
R443	1-247-871-11	CARBON	47K	5%	1/4W
R450	1-247-871-11	CARBON	47K	5%	1/4W
R451	1-247-871-11	CARBON	47K	5%	1/4W
R452	1-249-417-11	CARBON	1K	5%	1/4W F

< RELAY >

RY301	1-515-921-11	RELAY (12V)			

< VARIABLE RESISTOR >

SFR201	1-228-994-00	RES, ADJ, METAL 10K			

****

*	1-666-451-11	MOTOR BOARD			
		**********			

< CAPACITOR >

C01	1-126-963-11	ELECT	4.7uF	20%	50V

< CONNECTOR >

* CN06	1-568-824-11	SOCKET, CONNECTOR 5P			

< MOTOR >

M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)			

****

*	1-639-678-12	MOTOR (6P) (S) BOARD			
		**********			

< CONNECTOR >

CN1	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			

< MOTOR >

M101	X-2625-877-1	MOTOR ASSY (SPINDLE)			
M102	X-2625-769-1	MOTOR ASSY (SLED)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MOTOR (6P) (S) | O/C | PANEL

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S1	1-572-085-11	SWITCH, LEAF (LIMIT)			
**********					
*	1-666-439-11	O/C BOARD			
		*********			
		< SWITCH >			
S623	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(⏏ OPEN/CLOSE)			
S627	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC SKIP)			
**********					
*	A-4398-918-A	PANEL BOARD, COMPLETE (MX)			
		**********			
*	A-4403-221-A	PANEL BOARD, COMPLETE (E,AR)			
		**********			
*	A-4403-354-A	PANEL BOARD, COMPLETE (AEP,UK)			
		**********			
	4-992-826-01	PLATE, DISPLAY			
	4-992-827-01	HOLDER, DISPLAY			
	4-993-057-01	HOLDER, LED			
		< CAPACITOR >			
C601	1-164-159-11	CERAMIC	0.1uF		50V
C603	1-124-471-00	ELECT	1000uF	20%	6.3V
C604	1-161-494-00	CERAMIC	0.022uF		25V
C607	1-126-022-11	ELECT	47uF	20%	16V
C608	1-164-159-11	CERAMIC	0.1uF		50V
C609	1-126-045-11	ELECT	2.2uF	20%	50V
C610	1-126-044-11	ELECT	1uF	20%	50V
C611	1-164-159-11	CERAMIC	0.1uF		50V
C612	1-126-964-11	ELECT	10uF	20%	50V
C613	1-161-494-00	CERAMIC	0.022uF		25V
C614	1-126-044-11	ELECT	1uF	20%	50V
C615	1-162-282-31	CERAMIC	100PF	10%	50V
C616	1-161-494-00	CERAMIC	0.022uF		25V
C617	1-162-202-31	CERAMIC	13PF	5%	50V
C618	1-162-202-31	CERAMIC	13PF	5%	50V
C619	1-161-494-00	CERAMIC	0.022uF		25V
C620	1-164-159-11	CERAMIC	0.1uF		50V
C621	1-104-665-11	ELECT	100uF	20%	16V
C622	1-104-665-11	ELECT	100uF	20%	16V
C623	1-104-665-11	ELECT	100uF	20%	16V
C624	1-162-306-11	CERAMIC	0.01uF	20%	16V
C628	1-162-286-31	CERAMIC	220PF	10%	50V
		< CONNECTOR >			
* CN301	1-770-332-11	HOUSING, CONNECTOR (PC BOARD) 17P			
CN601	1-568-838-11	SOCKET, CONNECTOR 21P			
		< DIODE >			
D601	8-719-987-63	DIODE 1N4148M			
D602	8-719-987-63	DIODE 1N4148M			
D603	8-719-987-63	DIODE 1N4148M			
D604	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description			Remark
D608	8-719-911-19	DIODE 1SS119 (MX)			
D609	8-719-987-63	DIODE 1N4148M (EXCEPT MX)			
D610	8-719-987-63	DIODE 1N4148M			
D611	8-719-987-63	DIODE 1N4148M			
D612	8-719-987-63	DIODE 1N4148M			
D613	8-719-987-63	DIODE 1N4148M			
D614	8-719-987-63	DIODE 1N4148M			
D615	8-719-987-63	DIODE 1N4148M			
D616	8-719-987-63	DIODE 1N4148M			
D617	8-719-987-63	DIODE 1N4148M			
D619	8-719-987-63	DIODE 1N4148M			
D620	8-719-987-63	DIODE 1N4148M (MX)			
D622	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC601	8-759-473-58	IC uPD753017AGC-E02-3B9			
IC602	8-759-241-12	IC TC74HC237AP			
IC603	8-759-473-61	IC BU2114			
		< COIL >			
L601	1-408-096-00	INDUCTOR 470uH			
L602	1-412-507-11	INDUCTOR 47uH			
L603	1-412-507-11	INDUCTOR 47uH			
		< LIQUID CRYSTAL DISPLAY >			
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< DIODE >			
LED601	8-719-300-79	DIODE SEL1213C (DBFB)			
		< LAMP >			
LP601	1-518-527-51	LAMP, PILOT			
LP602	1-518-527-51	LAMP, PILOT			
LP603	1-518-527-51	LAMP, PILOT			
		< TRANSISTOR >			
Q601	8-729-194-57	TRANSISTOR 2SC945-P			
Q602	8-729-194-57	TRANSISTOR 2SC945-P			
Q603	8-729-194-57	TRANSISTOR 2SC945-P			
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q605	8-729-194-57	TRANSISTOR 2SC945-P			
Q606	8-729-194-57	TRANSISTOR 2SC945-P (E,AR)			
		< RESISTOR >			
R601	1-247-871-11	CARBON	47K	5%	1/4W
R602	1-249-417-11	CARBON	1K	5%	1/4W F
R603	1-249-417-11	CARBON	1K	5%	1/4W F
R604	1-247-871-11	CARBON	47K	5%	1/4W
R605	1-247-871-11	CARBON	47K	5%	1/4W
R606	1-249-417-11	CARBON	1K	5%	1/4W F
R607	1-249-431-11	CARBON	15K	5%	1/4W
R608	1-247-871-11	CARBON	47K	5%	1/4W
R610	1-247-855-11	CARBON	10K	5%	1/4W
R611	1-247-879-11	CARBON	100K	5%	1/4W
R612	1-247-879-11	CARBON	100K	5%	1/4W
R613	1-247-879-11	CARBON	100K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R614	1-247-871-11	CARBON	47K	5%	1/4W
R615	1-247-871-11	CARBON	47K	5%	1/4W
R616	1-247-871-11	CARBON	47K	5%	1/4W
R617	1-247-871-11	CARBON	47K	5%	1/4W
R618	1-247-871-11	CARBON	47K	5%	1/4W
R619	1-247-871-11	CARBON	47K	5%	1/4W
R621	1-249-381-11	CARBON	1	5%	1/4W F
R622	1-249-381-11	CARBON	1	5%	1/4W F
R623	1-249-381-11	CARBON	1	5%	1/4W F
R624	1-247-855-11	CARBON	10K	5%	1/4W
R625	1-247-807-11	CARBON	100	5%	1/4W
R626	1-247-807-11	CARBON	100	5%	1/4W
R627	1-247-807-11	CARBON	100	5%	1/4W
R628	1-247-871-11	CARBON	47K	5%	1/4W
R629	1-249-409-11	CARBON	220	5%	1/4W
R633	1-249-408-11	CARBON	180	5%	1/4W F
R634	1-249-408-11	CARBON	180	5%	1/4W F
R635	1-249-408-11	CARBON	180	5%	1/4W F
R636	1-247-871-11	CARBON	47K	5%	1/4W
R637	1-247-847-11	CARBON	4.7K	5%	1/4W (E,AR)
R638	1-247-847-11	CARBON	4.7K	5%	1/4W
R641	1-247-871-11	CARBON	47K	5%	1/4W
R642	1-247-847-11	CARBON	4.7K	5%	1/4W
R643	1-247-847-11	CARBON	4.7K	5%	1/4W
R644	1-247-847-11	CARBON	4.7K	5%	1/4W
R645	1-247-847-11	CARBON	4.7K	5%	1/4W
R646	1-247-721-11	CARBON	4.7K	5%	1/4W F

< SWITCH >

S601	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(POWER)
S602	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TUNER/BAND)
S603	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(CD)
S604	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TAPE)
S605	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PHONO)
S606	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DBFB)
S607	1-571-914-21	SWITCH, KEY BOARD (VOLUME +)
S608	1-571-914-21	SWITCH, KEY BOARD (VOLUME –)
S609	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TUNING +, ▶▶ ▷▷|)
S610	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TUNING –, |◁◁ ◀◀)
S611	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET +)
S612	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET –)
S613	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(MEMORY)
S614	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(■)
S615	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(▷▮▮)
S616	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(SHUFFLE)
S617	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(REPEAT)
S618	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PROGRAM)
S619	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(CLOCK SET)
S620	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TIMER SET, CLOCK LIGHT)
S621	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TIMER MODE)
S622	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET EQ)

< VIBRATOR >

X601	1-760-096-11	VIBRATOR, CRYSTAL (4.19MHz)

****

Ref. No.	Part No.	Description			Remark
*	1-666-444-11	R/P SWITCH BOARD			
		**********			
		< CAPACITOR >			
C236	1-126-024-11	ELECT	220uF	20%	16V
C244	1-161-494-00	CERAMIC	0.022uF		25V
		< COIL >			
L202	1-411-822-11	COIL, CHOKE	470uH		
		< DIODE >			
D206	8-719-904-02	DIODE 1N4002T			
D207	8-719-904-02	DIODE 1N4002T			
		< SWITCH >			
SW201	1-571-135-11	SWITCH, PUSH (1KEY)(REC/PB)			

****

*	1-666-440-11	SENSOR BOARD
		**********
		< IC >
RM601	8-749-013-84	IC SPS-447-1

****

*	1-666-447-11	SW (A) BOARD
		**********
		< SWITCH >
S04	1-771-169-11	SWITCH, PUSH (TURN TABLE OPERATION DET)

****

*	1-666-448-11	SW (B) BOARD
		**********
		< SWITCH >
S03	1-771-169-11	SWITCH, PUSH (TURN TABLE POSITION DET)

****

*	1-666-449-11	SW (C) BOARD
		**********
		< SWITCH >
S02	1-571-300-31	SWITCH, ROTARY (OPEN/CLOSE DET)

****

*	1-666-450-11	SW (D) BOARD
		**********
		< SWITCH >
S01	1-571-300-31	SWITCH, ROTARY (OPTICAL PICK-UP UP/DOWN DET)

****

TUNER

Ref. No.	Part No.	Description				Remark
*	A-4403-154-A	TUNER BOARD, COMPLETE (AEP,UK) **********				
		< CAPACITOR >				
C102	1-162-294-11	CERAMIC	0.001uF	10%	50V	
C106	1-161-494-00	CERAMIC	0.022uF		25V	
C106A	1-162-207-11	CERAMIC	22PF	5%	50V	
C107	1-161-494-00	CERAMIC	0.022uF		25V	
C108	1-161-494-00	CERAMIC	0.022uF		25V	
C111	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C112	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C114	1-164-159-11	CERAMIC	0.1uF		50V	
C116	1-130-014-00	FILM	470PF	5%	50V	
C117	1-162-205-31	CERAMIC	18PF	5%	50V	
C118	1-104-665-11	ELECT	100uF	20%	16V	
C121	1-162-203-31	CERAMIC	15PF	5%	50V	
C122	1-126-961-11	ELECT	2.2uF	20%	50V	
C123	1-124-903-11	ELECT	1uF	20%	50V	
C124	1-162-206-31	CERAMIC	20PF	5%	50V	
C125	1-124-903-11	ELECT	1uF	20%	50V	
C126	1-110-671-31	CERAMIC	47000PF		50V	
C127	1-124-907-11	ELECT	10uF	20%	50V	
C128	1-161-494-00	CERAMIC	0.022uF		25V	
C129	1-124-903-11	ELECT	1uF	20%	50V	
C130	1-136-156-00	FILM	0.018uF	5%	50V	
C131	1-136-156-00	FILM	0.018uF	5%	50V	
C132	1-130-471-00	MYLAR	0.001uF	5%	50V	
C133	1-130-471-00	MYLAR	0.001uF	5%	50V	
C135	1-126-962-11	ELECT	3.3uF	20%	50V	
C137	1-126-959-11	ELECT	0.47uF	20%	50V	
C138	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C139	1-161-494-00	CERAMIC	0.022uF		25V	
C140	1-104-665-11	ELECT	100uF	20%	16V	
C141	1-161-494-00	CERAMIC	0.022uF		25V	
C142	1-104-665-11	ELECT	100uF	20%	16V	
C143	1-126-959-11	ELECT	0.47uF	20%	50V	
C144	1-161-494-00	CERAMIC	0.022uF		25V	
C145	1-162-217-31	CERAMIC	56PF	5%	50V	
C146	1-104-665-11	ELECT	100uF	20%	16V	
C147	1-161-494-00	CERAMIC	0.022uF		25V	
C148	1-164-159-11	CERAMIC	0.1uF		50V	
C149	1-161-494-00	CERAMIC	0.022uF		25V	
C150	1-164-159-11	CERAMIC	0.1uF		50V	
C151	1-162-285-31	CERAMIC	180PF	10%	50V	
C152	1-164-736-31	CERAMIC	0.0012uF	10%	50V	
C153	1-161-494-00	CERAMIC	0.022uF		25V	
C154	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C157	1-162-294-11	CERAMIC	0.001uF	10%	50V	
C160	1-161-494-00	CERAMIC	0.022uF		25V	
C161	1-124-903-11	ELECT	1uF	20%	50V	
C162	1-124-903-11	ELECT	1uF	20%	50V	
C163	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C164	1-162-290-11	CERAMIC	470PF	10%	50V	
C166	1-162-199-31	CERAMIC	10PF	5%	50V	
C207	1-104-664-11	ELECT	47uF	20%	16V	
C208	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C209	1-162-282-31	CERAMIC	100PF	10%	50V	
C210	1-162-282-31	CERAMIC	100PF	10%	50V	
C211	1-162-282-31	CERAMIC	100PF	10%	50V	
C212	1-162-282-31	CERAMIC	100PF	10%	50V	
C213	1-162-210-31	CERAMIC	30PF	5%	50V	
C214	1-162-210-31	CERAMIC	30PF	5%	50V	
C215	1-126-233-11	ELECT	22uF	20%	50V	
		< FILTER >				
CF101	1-567-107-00	FILTER, CERAMIC				
CF102	1-567-107-00	FILTER, CERAMIC				
CF103	1-527-996-11	FILTER, CERAMIC				
CF104	1-579-856-31	DISCRIMINATOR, CERAMIC				
CF105	1-577-075-11	OSCILLATOR, CERAMIC				
		< CONNECTOR >				
CN101	1-779-766-11	CONNECTOR				
		< DIODE >				
D101	8-719-987-63	DIODE 1N4148M				
D102	8-719-987-63	DIODE 1N4148M				
D108	8-719-800-72	DIODE 1SV149-B				
D109	8-719-800-72	DIODE 1SV149-B				
D110	8-719-109-89	DIODE RD5.6ESB2				
D111	8-719-987-63	DIODE 1N4148M				
D112	8-719-987-63	DIODE 1N4148M				
D202	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC102	8-759-090-40	IC LA1831				
IC201	8-759-175-87	IC LC7218-ST				
		< JACK >				
JK101	1-694-126-11	TERMINAL BOARD (ANTENNA)				
		< COIL >				
L101	1-429-550-11	TRANSFORMER, FM ANT				
L102	1-412-503-11	INDUCTOR 22uH				
L103	1-412-503-11	INDUCTOR 22uH				
L104	1-411-901-11	COIL, ANTENNA				
L105	1-429-555-11	TRANSFORMER, MW OSC				
L106	1-412-503-11	INDUCTOR 22uH				
L107	1-408-417-00	INDUCTOR 47uH				
L108	1-408-417-00	INDUCTOR 47uH				
L110	1-410-527-11	INDUCTOR 100uH				
L203	1-412-507-11	INDUCTOR 47uH				
		< TRANSISTOR >				
Q101	8-729-015-41	TRANSISTOR 2SC1675-T1				
Q105	8-729-902-80	TRANSISTOR DTA114YS				
Q106	8-729-041-83	TRANSISTOR 2SK544E				
Q107	8-729-194-57	TRANSISTOR 2SC945-P				
Q108	8-729-194-57	TRANSISTOR 2SC945-P				
		< RESISTOR >				
R104	1-247-807-11	CARBON	100	5%	1/4W	
R105	1-249-417-11	CARBON	1K	5%	1/4W	F
R106	1-247-839-11	CARBON	2.2K	5%	1/4W	
R107	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R108	1-249-411-11	CARBON	330	5%	1/4W	

Ref. No.	Part No.	Description			Remark
R112	1-247-849-11	CARBON	5.6K	5%	1/4W
R113	1-247-879-11	CARBON	100K	5%	1/4W
R114	1-247-879-11	CARBON	100K	5%	1/4W
R115	1-249-397-11	CARBON	22	5%	1/4W F
R118	1-247-807-11	CARBON	100	5%	1/4W
R119	1-249-413-11	CARBON	470	5%	1/4W F
R120	1-247-843-11	CARBON	3.3K	5%	1/4W
R121	1-247-843-11	CARBON	3.3K	5%	1/4W
R122	1-247-843-11	CARBON	3.3K	5%	1/4W
R123	1-249-428-11	CARBON	8.2K	5%	1/4W F
R126	1-249-427-11	CARBON	6.8K	5%	1/4W F
R127	1-249-427-11	CARBON	6.8K	5%	1/4W F
R128	1-249-427-11	CARBON	6.8K	5%	1/4W F
R129	1-249-427-11	CARBON	6.8K	5%	1/4W F
⚠R130	1-212-986-00	FUSIBLE	150	5%	1/2W F
R131	1-249-417-11	CARBON	1K	5%	1/4W F
R132	1-247-855-11	CARBON	10K	5%	1/4W
R133	1-247-843-11	CARBON	3.3K	5%	1/4W
R134	1-247-843-11	CARBON	3.3K	5%	1/4W
R137	1-247-855-11	CARBON	10K	5%	1/4W
R140	1-249-417-11	CARBON	1K	5%	1/4W F
R141	1-249-409-11	CARBON	220	5%	1/4W F
R145	1-249-417-11	CARBON	1K	5%	1/4W F
R146	1-247-807-11	CARBON	100	5%	1/4W
R155	1-249-411-11	CARBON	330	5%	1/4W
R156	1-247-855-11	CARBON	10K	5%	1/4W
R210	1-247-847-11	CARBON	4.7K	5%	1/4W
R211	1-249-417-11	CARBON	1K	5%	1/4W F
R212	1-247-855-11	CARBON	10K	5%	1/4W
R213	1-247-855-11	CARBON	10K	5%	1/4W
R214	1-249-427-11	CARBON	6.8K	5%	1/4W F
R215A	1-249-417-11	CARBON	1K	5%	1/4W F
		< VARIABLE RESISTOR >			
SFR101	1-238-600-11	RES, ADJ, CARBON 10K			
		< TRANSFORMER >			
T101	1-429-553-11	TRANSFORMER, FM IFT			
T102	1-429-554-11	TRANSFORMER, AM IFT			
		< TRIMMER >			
TC102	1-141-304-21	CAP, TRIMMER 10PF			
		< FRONT END >			
U1	1-473-755-11	BLOCK (FRONT END)			
		< VIBRATOR >			
X201	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)			

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*	A-4398-942-A	TUNER BOARD, COMPLETE (E,AR,MX)			
		**********			
		< CAPACITOR >			
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V
C102	1-162-294-31	CERAMIC	0.001uF	10%	50V
C103	1-162-197-31	CERAMIC	6.8PF	10%	50V
C104	1-161-494-00	CERAMIC	0.022uF		25V
C105	1-162-206-31	CERAMIC	20PF	5%	50V
C106	1-161-494-00	CERAMIC	0.022uF		25V
C107	1-161-494-00	CERAMIC	0.022uF		25V
C108	1-161-494-00	CERAMIC	0.022uF		25V
C110	1-162-191-31	CERAMIC	2.2PF	10%	50V
C111	1-162-217-31	CERAMIC	56PF	5%	50V
C112	1-162-282-31	CERAMIC	100PF	10%	50V
C114	1-164-159-11	CERAMIC	0.1uF		50V
C115	1-162-294-31	CERAMIC	0.001uF	10%	50V
C116	1-130-014-00	FILM	470PF	5%	50V
C117	1-162-208-31	CERAMIC	24PF	5%	50V
C118	1-126-933-11	ELECT	100uF	20%	16V
C121	1-162-203-31	CERAMIC	15PF	5%	50V
C122	1-126-961-11	ELECT	2.2uF	20%	50V
C123	1-126-960-11	ELECT	1uF	20%	50V
C124	1-162-206-31	CERAMIC	20PF	5%	50V
C125	1-126-960-11	ELECT	1uF	20%	50V
C126	1-162-600-11	CERAMIC	0.047uF	10%	16V
C127	1-126-964-11	ELECT	10uF	20%	50V
C128	1-161-494-00	CERAMIC	0.022uF		25V
C129	1-126-960-11	ELECT	1uF	20%	50V
C130	1-136-155-00	FILM	0.015uF	5%	50V
C131	1-136-155-00	FILM	0.015uF	5%	50V
C132	1-130-473-00	MYLAR	0.0015uF	5%	50V
C133	1-130-473-00	MYLAR	0.0015uF	5%	50V
C134	1-162-294-31	CERAMIC	0.001uF	10%	50V
C135	1-126-962-11	ELECT	3.3uF	20%	50V
C137	1-126-959-11	ELECT	0.47uF	20%	50V
C138	1-162-306-11	CERAMIC	0.01uF	20%	16V
C139	1-161-494-00	CERAMIC	0.022uF		25V
C140	1-126-933-11	ELECT	100uF	20%	16V
C141	1-161-494-00	CERAMIC	0.022uF		25V
C142	1-126-933-11	ELECT	100uF	20%	16V
C143	1-126-962-11	ELECT	3.3uF	20%	50V
C144	1-162-306-11	CERAMIC	0.01uF	20%	16V
C145	1-162-217-31	CERAMIC	56PF	5%	50V
C147	1-161-494-00	CERAMIC	0.022uF		25V
C148	1-162-294-31	CERAMIC	0.001uF	10%	50V
C149	1-161-494-00	CERAMIC	0.022uF		25V
C150	1-164-159-11	CERAMIC	0.1uF		50V
C151	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C152	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C153	1-161-494-00	CERAMIC	0.022uF		25V
C155	1-162-282-31	CERAMIC	100PF	10%	50V
C157	1-162-294-31	CERAMIC	0.001uF	10%	50V
C160	1-161-494-00	CERAMIC	0.022uF		25V
C161	1-126-960-11	ELECT	1uF	20%	50V
C162	1-126-960-11	ELECT	1uF	20%	50V
C207	1-126-967-11	ELECT	47uF	20%	16V
C208	1-162-306-11	CERAMIC	0.01uF	20%	16V
C209	1-162-282-31	CERAMIC	100PF	10%	50V
C210	1-162-282-31	CERAMIC	100PF	10%	50V
C211	1-162-282-31	CERAMIC	100PF	10%	50V
C212	1-162-282-31	CERAMIC	100PF	10%	50V
C213	1-162-209-31	CERAMIC	27PF	5%	50V
C214	1-162-209-31	CERAMIC	27PF	5%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description			Remark
C215	1-128-551-11	ELECT	22uF	20%	25V
C218	1-162-294-31	CERAMIC	0.001uF	10%	50V
		< FILTER >			
CF101	1-567-390-11	FILTER,CERAMIC			
CF102	1-567-107-00	FILTER, CERAMIC			
CF103	1-527-996-11	FILTER, CERAMIC			
CF104	1-579-856-11	DISCRIMINATOR, CERAMIC			
CF105	1-577-075-11	OSCILLATOR, CERAMIC			
		< CONNECTOR >			
CN101	1-779-766-11	CONNECTOR			
		< DIODE >			
D101	8-719-987-63	DIODE 1N4148M			
D102	8-719-987-63	DIODE 1N4148M			
D105	8-719-987-63	DIODE 1N4148M			
D106	8-719-059-68	DIODE KV1340A-2			
D107	8-719-059-68	DIODE KV1340A-2			
D108	8-719-800-72	DIODE 1SV149-B			
D109	8-719-800-72	DIODE 1SV149-B			
D110	8-719-109-89	DIODE RD5.6ESB2			
D111	8-719-987-63	DIODE 1N4148M			
D112	8-719-987-63	DIODE 1N4148M			
		< IC >			
IC101	8-759-801-96	IC LA1186			
IC102	8-759-090-40	IC LA1831			
IC201	8-759-175-87	IC LC7218-ST			
		< JACK >			
JK101	1-694-092-21	TERMINAL BOARD (SPEAKER)(ANTENNA)			
		< COIL >			
L101	1-429-550-11	TRANSFORMER, FM ANT			
L102	1-429-551-11	TRANSFORMER, FM RF			
L103	1-411-798-11	COIL, FM OSC			
L104	1-411-901-11	COIL, ANTENNA			
L105	1-429-555-11	TRANSFORMER, MW OSC			
L107	1-408-417-00	INDUCTOR 47uH			
L108	1-408-417-00	INDUCTOR 47uH			
L203	1-410-517-11	INDUCTOR 47uH			
		< TRANSISTOR >			
Q101	8-729-015-41	TRANSISTOR 2SC1675-T1			
Q102	8-729-015-41	TRANSISTOR 2SC1675-T1			
Q105	8-729-902-80	TRANSISTOR DTA114YS			
Q106	8-729-041-83	TRANSISTOR 2SK544E			
Q107	8-729-194-57	TRANSISTOR 2SC945-P			
Q108	8-729-194-57	TRANSISTOR 2SC945-P			
Q109	8-729-904-36	TRANSISTOR DTC114YS			
		< RESISTOR >			
R101	1-247-879-11	CARBON	100K	5%	1/4W
R102	1-249-417-11	CARBON	1K	5%	1/4W F
R103	1-249-393-11	CARBON	10	5%	1/4W F
R104	1-247-807-11	CARBON	100	5%	1/4W
R105	1-249-417-11	CARBON	1K	5%	1/4W F

Ref. No.	Part No.	Description			Remark
R106	1-247-843-11	CARBON	3.3K	5%	1/4W
R107	1-249-427-11	CARBON	6.8K	5%	1/4W F
R108	1-249-411-11	CARBON	330	5%	1/4W
R109	1-247-879-11	CARBON	100K	5%	1/4W
R110	1-247-867-11	CARBON	33K	5%	1/4W
R111	1-249-417-11	CARBON	1K	5%	1/4W F
R112	1-247-807-11	CARBON	100	5%	1/4W
R113	1-247-879-11	CARBON	100K	5%	1/4W
R114	1-247-879-11	CARBON	100K	5%	1/4W
R115	1-249-397-11	CARBON	22	5%	1/4W F
R118	1-247-807-11	CARBON	100	5%	1/4W
R119	1-249-413-11	CARBON	470	5%	1/4W F
R120	1-247-843-11	CARBON	3.3K	5%	1/4W
R121	1-247-843-11	CARBON	3.3K	5%	1/4W
R122	1-247-843-11	CARBON	3.3K	5%	1/4W
R123	1-247-724-11	CARBON	8.2K	5%	1/4W F
R126	1-249-427-11	CARBON	6.8K	5%	1/4W F
R127	1-249-427-11	CARBON	6.8K	5%	1/4W F
R128	1-249-427-11	CARBON	6.8K	5%	1/4W F
R129	1-249-427-11	CARBON	6.8K	5%	1/4W F
R130	1-249-407-11	CARBON	150	5%	1/4W F
R131	1-247-713-11	CARBON	1K	5%	1/4W F
R132	1-247-855-11	CARBON	10K	5%	1/4W
R133	1-247-839-11	CARBON	2.2K	5%	1/4W
R134	1-247-843-11	CARBON	3.3K	5%	1/4W
R138	1-247-847-11	CARBON	4.7K	5%	1/4W
R140	1-247-843-11	CARBON	3.3K	5%	1/4W
R145	1-247-839-11	CARBON	2.2K	5%	1/4W
R149	1-249-431-11	CARBON	15K	5%	1/4W
R155	1-247-725-11	CARBON	10K	5%	1/4W F
R210	1-247-847-11	CARBON	4.7K	5%	1/4W
R211	1-249-417-11	CARBON	1K	5%	1/4W F
R212	1-247-855-11	CARBON	10K	5%	1/4W
R213	1-249-417-11	CARBON	1K	5%	1/4W F
R214	1-249-427-11	CARBON	6.8K	5%	1/4W F
R215A	1-249-417-11	CARBON	1K	5%	1/4W F
		< VARIABLE RESISTOR >			
SFR101	1-238-600-11	RES, ADJ, CARBON 10K			
		< TRANSFORMER >			
T101	1-429-553-11	TRANSFORMER, FM IFT			
T102	1-429-554-11	TRANSFORMER, AM IFT			
		< TRIMMER >			
TC101	1-141-232-00	CAP, TRIMMER			
TC102	1-141-232-00	CAP, TRIMMER			
		< VIBRATOR >			
X201	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)			

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Ref. No.	Part No.	Description	Remark
*	1-666-452-11	VOL SELECT BOARD (E,AR)	
		**********	
		< SWITCH >	
⚠SW801	1-762-734-11	SWITCH, SLIDE (VOLTAGE SELECTOR)	
**********			
		MISCELLANEOUS	
		**********	
⚠12	1-551-506-99	CORD, POWER (E,AR,MX)	
⚠12	1-696-572-21	CORD, POWER (UK)	
⚠12	1-765-558-11	CORD, POWER (AEP)	
* 163	1-759-417-11	DECK, MECHANICAL	
251	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
265	1-773-152-11	WIRE (FLAT TYPE) (21 CORE)	
⚠308	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
HE901	9-980-280-01	E HEAD (ERASE)	
HP901	9-980-287-01	HEAD (PLAY)	
HRP901	9-980-279-01	HEAD (REC/PLAY)	
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	
M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)	
M104	X-4948-766-1	MOTOR ASSY (A) (TRAY)	
M901	9-980-281-01	MOTOR (CAPSTAN/REEL)	
⚠PT302	1-431-461-11	TRANSFORMER, POWER (E,AR,MX)	
⚠PT302	1-431-462-11	TRANSFORMER, POWER (AEP,UK)	
SW202	9-980-270-01	LEAF SWITCH (A DECK)	
SW203	9-980-270-01	LEAF SWITCH (B DECK)	
SW204	9-980-271-01	LEAF SWITCH (PLAY)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-647-79	SCREW +P 3X10 TYPE2 SLIT	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT	
#3	7-685-158-19	SCREW +P 4X6 TYPE2 SLIT	
#5	7-685-131-19	SCREW +P 2.6X4 TYPE2 SLIT	
#6	7-685-139-29	SCREW, TAPPING, (M2.6X20)	
#7	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#9	7-624-118-01	RING, RETAINING E-2.5	
#10	7-685-903-21	SCREW +PTPWH 3X8 (TYPE2)	
#11	7-685-106-19	SCREW +P 2X10 TYPE2 SLIT	
#12	7-621-255-15	SCREW +P 2X3	
#13	7-685-139-19	SCREW +BTP 2.6X16 TYPE2 N-S	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.